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Assessing the Effectiveness of Nutrition and Physical Activity Self-Assessment for Child Care (NAP SACC) for Changes in Physical Activity Behavior, Policy, and Environment in Nebraska Family Child Care Homes

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by

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Nebraska is the first state to utilize NAP SACC and to modify the evidence-based program for family child care homes (FCCHs). The purpose of this study was to conduct a secondary data analysis to assess the effectiveness of a modified version of the NAP SACC approach in achieving changes in physical activity behavior, policy, and environment in Nebraska FCCHs caring for children ages 2-5 years. Results from this study will be used to improve the NAP SACC physical activity components for FCCHs and will help to inform trainers and the Nebraska Department of Health and Human Services, Nutrition and Activity for Health Program of additional training needs of providers to effectively implement physical activity strategies in current and future NAP SACC FCCH sites.

The training, intervention, and data collection occurred November 2010 - June 2012, as part of the Nebraska Healthy Child Care Initiative project. The participants were providers in family child care homes enrolled in Child and Adult Care Food Program (CACFP). A variety of evaluation methods were utilized to assess the impact of NAP SACC in the FCCHs. Frequencies, means, paired sample t-test, and percent changes were

found for the physical activity data using IBM® SPSS® Statistics 21 software, from January 2013 - June 2013.

The most common goal, increase active play time, was also one of the most improved physical activity areas. Providers also reported an increase in their own physical activity levels. Differences in goals selected and improvements made were seen between facilities located in rural and urban counties, and between FCCH-I and FCCH-II facilities. The least interest and improvements were seen for Physical Activity Key Areas four and five. Most of the providers found the resources to be very helpful. Licensed, FCCHs enrolled in CACFP made positive changes to their physical activity policies and environments utilizing a modified version of the NAP SACC approach.

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CHAPTER I

INTRODUCTION

According to the Centers of Disease Control and Prevention, National Center for Health Statistics Data Brief (2012), approximately 35.7% of United States adults and almost 17% of youth, ages 2-19, were obese in 2009-2010.[1] Obesity is defined as a body mass index (BMI) greater than or equal to 30 for adults; for youth, obesity is defined at or above the 95th percentile on the CDC Growth Charts.[1] Although the prevalence of obesity did not significantly increase from 2007-2008 to 2009-2010[1], obesity and obesity prevention remain critical public health issues for people of all ages. Ages 0-5 years in an individual's life are an ideal time to promote and encourage healthy habits such as proper nutrition and physical activity. Although children of these ages have little control over their nutrition choices and physical activity parameters (i.e. type, frequency, duration, etc.), parents and child care providers' play a major role in the development of these habits early in life.

In 2009, the Nebraska Department of Health and Human Services - Nutrition and Activity for Health (NAFH) program identified a lack of consistent infrastructure pertaining to child care policy and environmental impacts to prevent childhood obesity.[2] With over 4,200 licensed child care facilities in Nebraska, and many enrolled in the Child and Adult Care Food Program (CACFP), the NAFH program recognized an opportunity to improve the health environment of child care facilities across the state.[2] Family child care homes (FCCHs) who are licensed and enrolled in the CACFP program were the target population for the implementation of a modified NAP SACC approach. The intervention and data collection occurred between November 2010 and June 2012.

Preliminary data analysis identified physical activity as a harder component to improve compared to nutrition in the family child care home facilities. However, further analysis was needed to investigate this finding further.

Purpose of Study and Research Questions

The purpose of this study was to conduct a secondary data analysis to assess the effectiveness of a modified version of the NAP SACC approach in achieving changes in physical activity behavior, policy, and environment in Nebraska family child care homes caring for children ages 2-5 years.

Research Question 1: Are there any differences in the physical activity behaviors, policies, and environments of Nebraska family child care homes caring for children ages 2-5 years after implementing the modified NAP SACC approach?

Hypothesis 1: The Healthy Child Care Initiative (NAP SACC) intervention will improve the physical activity policies and environments in Nebraska family child care homes caring for children ages 2-5 years.

Research Question 2: Are there any differences between the physical activity behaviors, policies, and environments of Nebraska family child care homes caring for children ages 2-5 years in urban and rural counties after implementing the modified NAP SACC approach?

Hypothesis 2: The Healthy Child Care Initiative (NAP SACC) intervention will independently improve the physical activity policies and environments in Nebraska family child care homes caring for children ages 2-5 years in urban and rural counties.

Research Question 3: Are there any differences between the physical activity behaviors, policies, and environments in Family Child Care Homes-I (FCCH-Is) and

Family Child Care Homes-II (FCCH-IIs) after implementing the modified NAP SACC approach?

Hypothesis 3: The Healthy Child Care Initiative (NAP SACC) intervention will independently improve the physical activity policies and environments in Family Child Care Homes-I and Family Child Care Homes-II in Nebraska.

Objectives

Objective 1: To assess changes in Physical Activity Key Areas implemented in family child care homes in Nebraska.

Objective 2: To evaluate differences of the NAP SACC Physical Activity Best Practices in rural and urban counties, and in family child care homes caring for eight or less children (FCCH-Is) verses nine or more children (FCCH-IIs),

Objective 3: To identify what types of physical activity resources were utilized and preferred by family child care home providers, and detect gaps where more resources are needed to help implement changes,

Objective 4: To identify child care provider successes and barriers to physical activity implementation in family child care homes in Nebraska.

Definition of Acronyms

NAP SACC	Nutrition and Physical Activity Self-Assessment for Child Care
NE DHHS	Nebraska Department of Health and Human Services
NAFH	Nutrition and Activity for Health
CACFP	Child and Adult Care Food Program
FCCHs	Family Child Care Homes
NAPSE	National Association for Sport and Physical Education
PCO	Preventing Childhood Obesity, second edition
IOM	Institute of Medicine
IMIL	I Am Moving, I Am Learning
USDA	United States Department of Agriculture
FNS	Food and Nutrition Services
FCCH–I(s)	Family Child Care Home – I: serve eight or less children
FCCH-II(s)	Family Child Care Home – II: servie nine or more children
CPPW	Communities Putting Prevention to Work
UNC	University of North Carolina
Center TRT	Center for Training and Research Translation
PA1	Active Play and Inactive Time (Physical Activity Key Area)
PA2	Play Environment (Physical Activity Key Area)
PA3	Supporting Physical Activity (Physical Activity Key Area)
PA4	Physical Activity Education for Staff, Children, and Parents (Physical Activity Key Area)
PA5	Physical Activity Policy (Physical Activity Key Area)

Assumption of Study

The results of this study should only be applied to licensed, CACFP-enrolled, family child care homes caring for children eight to twelve children, ages 2-5.

CHAPTER II

REVIEW OF LITERATURE

Current National Guidelines and Standards for Physical Activity

Currently, more than 12.25 million (61.3%) United States children less than five years of age are in some form care while their parents are working.[3] Approximately 3.5 million of those children are in child care centers or family child care homes.[3] The first six years of life is a critical period for the development of gross motor skills.[4] Infants, toddlers, and preschoolers need sufficient opportunities to learn and practice fundamental gross motor skills like crawling, rolling, walking, pushing, pulling, and climbing at home and in child care centers. These types of activities are considered physical activity for ages 0-5 years, and children should perform them multiple times each day. The National Association for Sport and Physical Education (NAPSE) developed five physical activity guidelines for 1) infants (birth to age 12 months), 2) toddlers (ages 12 to 36 months), and 3) preschoolers (ages 3 to 5). These guidelines were developed to support NAPSE's position statement, "all children from birth to age 5 should engage daily in physical activity that promotes movement skillfulness and foundations of health-related fitness."[4] The guidelines for each age category as described by NAPSE[4]:

1. Guidelines for Infants (birth to age 12 months):
    A. Infants should interact with caregivers in daily physical activities that are dedicated to exploring movement and the environment.
    B. Caregivers should place infants in settings that encourage and stimulate movement experiences and active play for short periods of time several times a day.

C. Infants' physical activity should promote skill development in movement.

D. Infants should be placed in an environment that meets or exceeds recommended safety standards for performing large-muscle activities.

E. Those in charge of infants' well-being are responsible for understanding the importance of physical activity and should promote movement skills by providing opportunities for structured and unstructured physical activity.

2. Guidelines for Toddlers (ages 12 to 36 months):

A. Toddlers should engage in a total of at least 30 minutes of structured physical activity each day.

B. Toddlers should engage in at least 60 minutes -- and up to several hours -- per day of unstructured physical activity and should not be sedentary for more than 60 minutes at a time, except when sleeping.

C. Toddlers should be given ample opportunities to develop movement skills that will serve as the building blocks for future motor skillfulness and physical activity.

D. Toddlers should have access to indoor and outdoor areas that meet or exceed recommended safety standards for performing large-muscle activities.

E. Those in charge of toddlers' well-being are responsible for understanding the importance of physical activity and promoting

movement skills by providing opportunities for structured and unstructured physical activity and movement experiences.

3. Guidelines for Preschoolers (ages 3 to 5):

    A. Preschoolers should accumulate at least 60 minutes of structured physical activity each day.

    B. Preschoolers should engage in at least 60 minutes -- and up to several hours -- of unstructured physical activity each day, and should not be sedentary for more than 60 minutes at a time, except when sleeping.

    C. Preschoolers should be encouraged to develop competence in fundamental motor skills that will serve as the building blocks for future motor skillfulness and physical activity.

    D. Preschoolers should have access to indoor and outdoor areas that meet or exceed recommended safety standards for performing large-muscle activities.

    E. Caregivers and parents in charge of preschoolers' health and well-being are responsible for understanding the importance of physical activity and for promoting movement skills by providing opportunities for structured and unstructured physical activity.

The Second Edition of Preventing Childhood Obesity in Early Care and Education Programs (PCO) presents a set of evidenced-based national standards, including physical activity and screen time standards, published in Caring for Our Children: National Health and Safety Performance Standards; Guidelines for Early Care and Education Programs, Third Edition. The standards were specially designed to assist

early child care and education programs with implementation of best practices, procedures, and policies to promote and instill healthy lifestyle behaviors and choices in support of childhood obesity prevention.[5] Physical activity standards address common barriers to physical activity and give concrete examples of how to enhance physical activity opportunities in early care and education programs. For example, the first standard addresses active play; it is titled "active opportunities for physical activity." PCO outlines the standard as follows[5]:

> The facility should promote children's active play every day. Children should have ample opportunity to do moderate to vigorous activities such as running, climbing, dancing, skipping, and jumping. All children birth to six years, should participate daily in:
>
> a) Two to three occasions of active play outdoors, weather permitting;
> b) Two or more structured or caregiver/teacher/adult-led activities or games that promote movement over the course of the day – indoor or outdoor.
> c) Continuous opportunities to develop and practice age-appropriate gross motor and movement skills.

Additionally, the document outlines specific age-appropriate physical activity modes, equipment, duration, and frequencies for infants, toddlers, and preschoolers similar to the guidelines established by NAPSE. It also recommends caregivers participate in the structured activities they encourage the children to do, discourages withholding active play as a punishment for bad behavior, reinforces the importance of adequate space for active play both in- and outdoors, and explains the rationale of each standard using evidence-based facts. Other standards outlined in PCO include playing

outdoors, protection from air pollution while children are outside, caregivers/teachers' encouragement of physical activity, policies and practices that promote physical activity, and limiting screen time.

The Institute of Medicine (IOM) also outlined physical activity and nutrition policy goals, recommendations, and potential actions for promoting healthy environments for young children in the Early Childhood Obesity Prevention Policies report. The recommendations for physical activity were based off the following goals: 1) increase physical activity in young children, 2) decrease sedentary behavior in young children, and 3) help adults increase physical activity and decrease sedentary behavior in young children.[6] Goals and recommendation were also made for limiting screen time and marketing food/beverages to young children.

The guidelines, standards, and recommendations specified by NAPSE, PCO, and IOM are very similar in many aspects related to physical activity and limiting screen time. However, having more than one evidenced-based physical activity policy publication has created some confusion and resistance.

Current Obesity Prevention Programs

The IOM reported "almost 10 percent of infants and toddlers carry excess weight for their length, and slightly more than 20 percent of children between the ages of two and five already are overweight and obese."[6] Obesity prevention is currently a pressing issue, especially for children. Lack of adequate physical activity and unhealthy eating habits are widely recognized issues; however, very few children have healthy eating and physical activity habits that would decrease their risk of overweight.[10] As child care becomes part of daily life for an increasing number of U.S. children, it is becoming a

more vital site for childhood obesity prevention opportunities that reinforce healthy eating and physial activity. Several resources and childhood obesity prevention programs, appropriate for child care settings and preschools, have been developed and evaluated to address their effectiveness in preventing childhood obesity. Examples of these evaluated programs include: Team Nutrition for Child Care Providers, "I Am Moving, I Am Learning" (IMIL), Animal Trackers, Color Me Healthy, Growing Up Wild, and NAP SACC.

The United States Department of Agriculture (USDA) Food and Nutrition Services (FNS) Team Nutrition website, www.fns.usda.gov/teamnutrition, has made nutrition resources specific to child care settings readily available. Child care providers can access resources such as games, a guide for buying food, tips for nutrition requirements for young children of various ages, and a book titled "The Two-Bite Club" which teaches young children about MyPlate. Child care providers can download and/or order these resources through the Team Nutrition website free of cost if they participate in the Federal Child Nutrition Program. Assessment of the use and effectiveness of these resources have not been formally evaluated.

In 2005, Head Start administrators designed and initiated a pilot project called IMIL. This project was designed to fit into the existing Head Start program, not add to it. The three goals of IMIL included: 1) increase the amount of time children spend in moderate to vigorous physical activity during their daily routines, 2) improve the quality of structured movement activities that are facilitated by teachers and adults, and 3) promote healthy food choices for children each day.[8] An animated character named "Choosy" (Choose Healthy Options Often and Start Young) and songs were incorporated

to enhance structured and unstructured physical activity and encourage healthy habits. Evaluation of IMIL implementation has been studied but those studies have not investigated the programs the effectiveness based on its outcomes.

A 10-week pilot study, of the program Animal Trackers, was conducted in nine New Mexico preschools, and the results from the evaluation were promising. Animal Trackers is a program that aims to increase physical activity in preschool children. The goals of the program include: 1) increase structured physical activity during the preschool day, 2) increase practice of gross motor skills, 3) provide teachers with an easy-to-use physical activity program regardless of teacher experience, and 4) implement a teacher walking intervention.[9] The primary intervention consisted of 10 units, each with six 10-minute physical activities designed to enhance age-appropriate gross motor skills. These activities were selected specifically for the classroom setting, and teachers were provided with the resources to teach each activity such as Creeping and Crawling with Lenny the Lizard. Although physical activity levels and changes in gross motor skills of the children were not directly measured, the teachers reported this program increased the amount of physical activity completed by the children by 47 minutes per week, or an average of 11.4 minutes each day.[9] This was not a statistically significant increase.[9] The teachers also reported the activities were age- and developmentally-appropriate, the children enjoyed the activities, and improvements in children's motor skills were seen with practice. The direct benefits of the additional 47 minutes of physical activity each week on childhood obesity are not clear, as the optimal dose for obesity prevention is not known at this time.

Another program, Color Me Healthy, was designed for child care settings to educate children ages 4-5 on healthy eating and physical activity. The program was first implemented in North Carolina and child care providers utilized curriculum kits to deliver the program after participating in a "Train-the-Trainer" workshop. The curriculum kits included: a teacher's guide, picture cards of foods and physical activities, classroom posters, original music, a hand stamp, and parent newsletters and posters.[10] This program was developed using the Social Cognitive Theory and the socioecological model, both of which showed to aid in its positive effects. An 8-week follow-up survey was mailed to accepting providers to collect feedback. Ninety-two percent of the providers that responded reported physical activity increased using Color Me Healthy, and 91.8% of the respondents reported that it increased the children's knowledge about movement.[10] Although this program was positively accepted by child care providers and the children, it is targeted to a specific age group (ages 4-5) with no additional curriculums for younger age groups.

Growing Up WILD incorporates healthy habits and nature exploration in a child care-friendly manner. This program helps connect young children to the outdoors in a variety of ways such as a Take Me Outside section – the physical activity component that takes the learning outside and involves nature hikes or running games. The 27 activities of the program teach and encourage healthy behaviors, creativity, math, science, literacy, and environmentally-friendly practices in various age- and developmentally-appropriate ways. This program has not been formally evaluated to assess its effectiveness.

The NAP SACC intervention is an evidence-based intervention developed by the University of North Carolina and the North Carolina Department of Health and Human

Services in 2002. It is designed to enhance policies, practices, and environments in child care centers. NAP SACC is made up of five steps, or components: 1) self-assessment, 2) action planning, 3) workshop delivery, 4) targeted technical assistance, and 5) evaluate, revise, and repeat. The first step, self-assessment, utilizes a survey tool to assess 54 established best-practice guidelines in 15 key nutrition and physical activity areas, including improving the nutritional quality of foods served; amount and quality of physical activity; staff-child interactions; and nutrition and physical activity policies and practices related to the child care setting.[12,13] The self-assessment tool was evaluated for reliability and validity in 2007, and the results showed this tool to be stable and reasonably accurate for use in child care settings.[14]

After the self-assessment has been completed, the child care provider consults with a trained NAP SACC consultant to identify areas of improvement. The consultant helps the child care provider develop a realistic and feasible action plan (step 2) to help make three to four improvements to the facilities nutrition and physical activity environment, policies, and/or practices. The next step, workshop delivery, takes place after the action plan has been developed. In the original program, the NAP SACC consultant delivered four ready-to-use workshops to the facility employees. These 30-60 minute workshops covered: 1) Childhood Overweight, 2) Nutrition for children, 3) Physical Activity for Children, and 4) Personal Health and Wellness.[17] The modified NAP SACC approach used for this intervention includes five ready-to-use workshops; the previous four workshops plus a fifth that focuses on family-based wellness efforts.[18] These workshops present child care providers with up-to-date information on nutrition and physical activity requirements for young children and adults, and also make

resources to increase nutrition and physical activity knowledge of the children, staff, and parents readily available.

Once the workshops have been delivered, the facility's child care staff members are responsible for making the improvements outlined in the action plan and are able to utilize the resources provided to them. If questions or problems arise in this part of the program, child care providers can utilize their NAP SACC consultants for targeted technical assistance (step 4). The NAP SACC consultant is to maintain regular contact with the facility, and provide support and guidance during the improvement process. The final step of the program is to evaluate the improvements made, or not made, using the same self-assessment tool utilized for step one. At this time, the action plan is revised to include new goals and objectives, and technical assistance from the consultant continues.

NAP SACC integrates components of Social Cognitive Theory and the socioecological model, a relationship that has been shown to be advantageous in intervention research.[13,15] The NAP SACC intervention has been extensively evaluated and appropriate revisions have been made and re-evaluated as a result of the pilot study. For example, some child care providers in the pilot study reported questions on the self-assessment tool to be unclear. These questions were revised, re-evaluated by national experts, and further revisions were made to the self-assessment survey.[15] A positive outcome of the pilot study, and the most common environmental change reported, was that facilities switched from whole to reduced-fat milk for children over two.[13] Another study conducted in Arizona reported that multiple improvements to the nutrition and physical activity environment were made in most of the participating child care facilities.[16] Areas of improvement included menus and variety, meals and snacks, foods

offered outside of regular meals and snacks, physical activity posters, pictures, or books on display or available in every room, indoor play space and number of portable play equipment pieces, and attraction and accessibility of outdoor play spaces.[16] The pilot study and the intervention in Arizona both showed positive changes in the nutrition and physical activity environments of the selected child care facilities. The NAP SACC program is a promising approach to promote healthy weight in child care settings.

Family Child Care Home Verses Child Care Centers

What is the difference between family child care homes (FCCHs) and child care centers? By definition, FCCHs are located in the residence of the owner and operator of the child care facility.[19] Child care centers generally care for more children, in a facility not considered a residential home, and typically have more staff or employees. In Nebraska, the law requires child care licensure for any individual providing child care to four or more children, from different families, at any one time. Nebraska issues four separate licenses for child care and preschool: Family Child Care Home I, Family Child Care Home II, Child Care Center, and Preschool. Nebraska defines the four separate licenses as[20]:

Family Child Care Home I: Program in the home of the provider; maximum capacity is eight children of mixed ages and two additional school age children during non-school hours.

Family Child Care Home II: Program in the home of the provider or another site; maximum capacity is twelve with two providers.

Child Care Center: Program licensed for at least 13 children.

Preschool: Program providing educational services where children do not nap and are not fed a meal.

Each type of license has specific requirements and mandatory fees clearly defined on the Nebraska Department of Health and Human Services website, http://dhhs.ne.gov.

Child care is primarily regulated at the state level. The National Resource Center for Health and Safety in Child Care and Early Education website contains information on each individual state's regulations, and is the most up-to-date resource for all 50 states and the District of Columbia's regulations. This website was utilized by Benjamin et al. (2008) to describe and contrast individual state regulations on nutrition and physical activity related to childhood obesity prevention for child care centers and family child care homes. The researchers examined each state's regulations for eight key nutrition and physical activity regulations that may contribute to childhood obesity: 1) water is freely available, 2) sugar-sweetened beverages are limited, 3) foods of low nutritional value are limited, 4) children are not forced to eat, 5) food is not used as a reward, 6) support is provided for breastfeeding and provision of breast milk, 7) screen time is limited, and 8) physical activity is required daily.[19] Nebraska did not have any of the regulations related to childhood obesity prevention for child care centers or family child care homes.[19]

The investigated Nebraska's child care regulations had been in effect since March 1998. According to the Nebraska Department of Health and Human Services website, those regulations were operative until May 20, 2013.[21] The only specific standard outlined in those regulations that related to childhood obesity prevention was that at least 50 square feet of outdoor play space per child must be available.[22] The other standards were vague or non-existent regarding meal and snack requirements, physical activity

types, frequencies, and durations for certain age groups. In 2010, Congress called on the states to improve their child-care licensing standards in the Healthy, Hunger-Free Kids Act (HHFKA). States were to improve their standards for the frequency and duration of daily age-appropriate physical activity, set stricter limits on the duration of screen time and sedentary time, and to improve the nutrition quality of meals and snacks by meeting the requirement of the federal Child and Adult Care Food Program (CACFP).[23] The current Nebraska's child care regulations, that went into effect May 20, 2013, are almost identical to the previous vague regulations.

Lack of standards concerning healthy nutrition and physical activity practices can be considered a barrier to creating a healthy environment in FCCHs and child care centers. Unfortunately, several other barriers may exist in addition to lack of standards at the state level, especially in terms of physical activity. Other potential barriers for daily physical activity include concerns about children's safety, time, curricular constraints, lack of space and/or equipment, lack of facility policy, and/or inadequate knowledge or training among caregivers to integrate physical activity into everyday tasks or curriculums. Presently, programs such as NAP SACC do exist to help child care providers reduce the number of barriers experienced at their facility, and to improve the physical activity environment for the young children. However, little research has been done to evaluate these barriers and the reduction of physical activity barriers using the NAP SACC intervention in FCCHs. Nebraska is the first state to utilize NAP SACC and to modify the evidence-based program for FCCHs. Therefore, the purpose of this study was to assess the effectiveness of a modified version of the NAP SACC approach in Nebraska FCCHs for changes in physical activity behavior, policy, and environment.

CHAPTER III

METHODOLOGY

The letter of approval from the IRB and letter of permission from the NE - DHHS Nutrition and Activity for Health Physical Activity Coordinator are shown in Appendices A1 and A2. The Timeline and Overview of the Nebraska Healthy Child Care Initiative from the Nebraska Healthy Child Care Initiative: Implementing NAP SACC in Child Care Homes Final Report is shown in Appendix A3. The NAP SACC Best Practice Recommendations for Child Care Facilities are provided in Appendix A4. The data collection tools are found in Appendices 5i-iv, which include: Provider Pre- and Post-Self Assessment surveys, NAP SACC Program Monitoring Guide, Post-Training Feedback Survey, and provider telephone interview schedule of questions.

Introduction

The data for this study was previously collected in November 2010 through June 2012, as part of the Nebraska Healthy Child Care Initiative project started by the NE DHHS in collaboration with various CACFP organizations across Nebraska. This project was selected as a Communities Putting Prevention to Work (CPPW) project in 2010 with the goal of adapting the center-based NAP SACC training for family child care home providers in Nebraska. The methodology used by the NE DHHS and CACFP organizations, as described in *Little Voices for Healthy Choices Nebraska Healthy Child Care Initiative: Implementing NAP SACC in Child Care Homes* final report (pg 3-7, 9-12) is provided verbatim in following sections. Results from this study will be used to improve the NAP SACC physical activity components for FCCHs, will help to inform trainers and the NE DHHS, NAFH program of additional training needs of providers to

effectively implement physical activity strategies in current and future NAP SACC FCCH sites, and will help generate future research on the effectiveness and impact of NAP SACC.

Subjects

Although the NAP SACC program was originally developed for implementation in child care centers, it was believed that this focus limited the overall scope of the program particularly since Nebraska has a distinct profile of child care facilities. Specifically, 2,744 are licensed FCCHs and enrolled in CACFP facilities. Child care centers are clustered in the more densely populated centers of the state like Lincoln, Omaha, and along the Interstate-80 corridor. Alternatively, licensed FCCHs are more numerous and likely to be found in all communities throughout the state. Therefore, with a statewide focus in mind, the implementation of the NAP SACC approach was adapted to be structured around training FCCH providers in Nebraska, which became the Nebraska Healthy Child Care Initiative.[24]

Background

The Initiative included several sequential goals: (1) build capacity to support efforts to improve healthy eating and physical activity in FCCH, (2) prepare trainers to provide guidance and assistance to FCCH providers, (3) conduct trainings with the FCCH providers to help them create action plans and implement strategies learned during trainings, (4) conduct 6 months follow-up after trainings, and (5) develop and implement a Nebraska Healthy Child Care Recognition Award to highlight facilities that are prioritizing, communicating, and fostering environments supportive of healthy eating and physical activity.[24] Various evaluation components were implemented at each step.

In an effort to build capacity, a grant coordinator was hired to assist in each component of this Initiative including communication with partners, training CACFP trainers, coordination for the Healthy Child Care Recognition Award, providing technical assistance for the CACFP trainers and FCCH providers, data collection and evaluation efforts, and the day-to-day programmatic activities. In addition, strategic partnerships were identified to assist in implementing the program activities including collaborations with the Nebraska Department of Education Nutrition Services, DHHS Lifespan Health Services section, the DHHS Child Care Licensure Unit, and six of the seven CACFP Sponsor Organizations in the state. The latter was instrumental in moving these efforts forward as providers tend to utilize CACFP organizations are their primary resource for information related to child care regulations and health information.[24,25]

During preliminary discussions, several of the CACFP Organization directors offered valuable insights that changed the dynamic of the overall initiative. Originally, the program intended to provide funding to local health departments to implement the NAP SACC program locally. The CACFP directors noted that FCCH providers do not view the local health departments as their main source of health information and moreover, they actually seek very little information on their own. Rather these providers work directly with their CACFP Sponsor Organization to get health information and use it in their facilities.[24]

Recognizing this limitation, six of the seven CACFP Sponsor Organizations (Provider's Network Inc., Child Nutrition Services, Family Services, Heartland Family Service, Midwest Child Care Association, and Panhandle Family Day Care Center) came

together to form the CACFP Sponsor Consortium to help reach FCCH providers and implement the NAP SACC Program.[24]

CACFP Trainer Selection and Training Process

Once the framework for the implementation was established, the trainer selection and preparation began. A total of ten trainers were chosen to represent the CACFP Consortium. These trainers were already providing training opportunities, making home visits, and assisting providers with meeting the requirements for CACFP. These established relationships were assets for the NAP SACC implementation as it made it easier for trainers to recruit FCCH providers, communicate with provider after the training, offer technical assistance and promote the Healthy Child Care Recognition Award. For the current Initiative, the trainers had to: 1) complete the online NAP SACC training module provided by the University of North Carolina (UNC) Center for Training and Research Translation (Center TRT), 2) participate in a half-day NE DHHS/NAFH sponsored training outlining the new Nebraska oriented format for the NAP SACC intervention, and 3) conduct technical assistance with the trained providers for a minimum of five weeks post-training, and 4) participate in ongoing monthly teleconference calls with NE DHHS/NAFH Program to share barriers, successes, and training updates (Appendix A3).[24]

During the online NAP SACC training, the CACFP trainers participated in a step-by-step process for implementing the NAP SACC intervention, which included directions to effectively implement the program, guidance documents and resources to support the process, and tests to assess the trainee's level of knowledge after completion of the online training. Each trainer was required to complete the online training and submit their

certificate of completion that they received after the final test of knowledge. Each of the ten CACFP trainers completed the online training module.[24]

The half-day NE DHHS/NAFH sponsored training was designed to help trainers take the information that they learned during the original online training and modify it to serve the purpose of the Nebraska Initiative. Specifically, this half-day training focused on changing the multiple visit approach to training FCCH providers on the NAP SACC program into a one-day training event. This process was restructured with the intent to ease the burden on home providers, who often have only one person running the facility as opposed to a larger staff in centers. During the one-day provider-focused training, the CACFP trainers would implement the evidence-based process including the self-assessment, goal setting and action planning, and workshop delivery. They would then offer a five-week period of technical assistance to the participating providers. The technical assistance was conducted through various methods such as in person meetings, telephone calls and emails.[24]

Finally, CACFP trainers were required to participate in a monthly teleconference, moderated by NE DHHS/NAFH Program. This was an ongoing activity that began half way through the implementation of the Initiative. At the suggestion of the NE DHHS/NAFH Program CDC Project Officer, monthly discussions were held with the trainers. It provided the CACFP trainers an opportunity to share their successes, barriers, and ask questions to the NE DHHS/NAFH Program staff and to other trainers. The teleconferences served as a hub to reconnect CACFP trainers throughout the process and helped to troubleshoot issues and share success stories from their recent trainings.[24]

Recruitment of Family Child Care Home Providers

The trainer preparation period was followed by recruitment of FCCHs for training. Recruitment was multifaceted consisting of letters, phone calls, in addition to personal recruitment from trainers (many of whom already had a working relationship with many FCCH providers). Other than being licensed and affiliated with CACFP, there were no strict criteria for recruiting child care homes. The Initiative planned to train a minimum of 310 FCCH providers on the modified NAP SACC Program and award a minimum of 150 homes with the Healthy Child Care Recognition Award. Over the two-year project period, the NAP SACC trainers recruited providers, conducted the trainings with the providers, and the Recognition Award was awarded to select providers. Two waves of trainings were provided across the state at multiple venues from November 2010 to March 2011 (Wave I) and then September 2011 to February 2012 (Wave II).[24]

NAP SACC Intervention in Family Child Care Homes

Participating providers attended the one-day training after which they were given time to implement practices they learned during the training. During the one-day training event, held on Saturdays, FCCH providers received training materials, healthy snacks and lunch, and continuing education credits that could be used for their licensure requirements. When providers left the training, they had already completed the self-assessment and had an action plan created to guide their healthy changes. The Nebraska Initiative had specifically asked providers to change a minimum of one nutrition related activity or policy and one physical activity related activity or policy. These suggested changes were based on need and the utilization of the NAP SACC Best Practice Recommendations for Child Care Facilities (Appendix A4) which provides simple,

specific environment or policy changes that can be included into the FCCH providers day-to-day activities, or more specifically, within their business handbooks. Providers had technical assistance made available to them as needed from their trainers following the initial training. The NE DHHS/NAFH Program partnered with the University of Nebraska-Lincoln, Bureau of Sociological Research (BOSR) to conduct a primarily evaluation of the Nebraska Healthy Child Care Initiative.[24]

Healthy Child Care Recognition Award

The Initiative culminated with the Healthy Child Care Recognition Award. This award was created in collaboration with the CACFP Sponsors Consortium to highlight those FCCH providers who participated in the NAP SACC intervention and were prioritizing, communicating, and fostering environments and policies that were supportive of healthy eating and physical activity.[24]

The award was disseminated as part of the post-assessment outreach and was promoted by the CACFP trainers. The application process was simple; providers were to self-report information such as name, address and contact information, and NAP SACC components completed (pre-self assessment, action plan, training, and post-self assessment) to ensure that FCCH providers completed the entire intervention process.[24] The FCCH needed to comply with three requirements to apply for the Healthy Child Care Recognition Award:

1) Had to complete the NAP SACC training process.

2) Had to show improvement in their facility's environment or policies.

3) Had to be in good standing with the NE DHHS Child Care Licensure.

A total of 162 FCCH providers received the award of the two-year project period. Awarded providers received a letter informing them of their recognition award with framed certificate, and an awardee list so that providers could see their peers who also participated in the process. The awarded providers also received materials (e.g. the NAP SACC tri-fold brochure, a parent letter informing parents on the process that their provider participated in, and a static cling that can be placed on their front door to highlight the facility as a Healthy Child Care facility) to help educate the parents of the children in their facilities. In addition, a monetary reward was provided by the CACFP Sponsor Consortium and was to be used for ongoing health improvement efforts specific to nutrition and physical activity action plan items.[24]

Data Collection Tools and Procedures

A table summarizing the following experimental procedures in chronological order can be found in Appendix A3.

A. Provider Pre- and Post-Self Assessment Surveys

At the NAP SACC trainings that took place between November 2010 to March 2011 (Wave I) and September 2011 to February 2012 (Wave II), participating FCCH providers were asked to complete a self-assessment of the practices and policies related to nutrition and physical activities at their facility. This self-assessment included nine nutrition and five physical activity Key Areas. Each of those sections contained approximately three to six questions in which providers indicated on a four point scale how close their facility was to meeting the Best Practices as recommend by the NAP SACC program (Appendix A4). A description of the four point scale follows:

1 = minimally engaging in the NAP SACC Best Practice recommendations

2 = modestly engaging in the NAP SACC Best Practice recommendations

3 = mostly engaging in the NAP SACC Best Practice recommendations

4 = fully engaging in the NAP SACC Best Practice recommendations

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Wave I completed the pre-self assessments between November 2010 to March 2011; the pre-self assessments were distributed to the providers at the one-day NAP SACC training. Approximately nine months later, participants were again asked to fill out the same self-assessment in the time period from August 2011 through November 2011. These two self-assessments served as a method of measuring the changes implemented by facilities after the training. Data from Wave I was statistically examined in this study; Wave II results will not be addressed in this study. Data were then processed and analyzed by the BOSR staff and NE DHHS/NAFH Program staff. A copy of the self-assessment can be found in Appendix A5i.[24]

B. NAP SACC Program Monitoring Guide

Each of the NAP SACC trainers completed a NAP SACC Program Monitoring Guide for each facility that took part in the NAP SACC training. The purpose of the monitoring guide was to document the dates that each facility completed various aspects of the NAP SACC program (e.g. pre- & post-self-assessment, developing an action plan, each instance of technical assistance follow-up, etc.). The monitoring guide also noted the Key Areas chosen for improvement by each facility as well as the Key Areas that each facility actually improved as deemed by the trainer. A copy of the monitoring guide is included in Appendix A5ii.[24]

C. Post-training Feedback survey

In May 2011, the BOSR sent a two-page paper survey titled "NAP SACC Post-Training Feedback" via the United States mail to the trained FCCH providers who had participated in the NAP SACC training. The NAP SACC trainers provided the list of participating facility managers and the instrument was distributed immediately after the one-day training workshop. The survey questions asked about the implementation status of NAP SACC "Nutrition Key Areas" and "Physical Activity Best Practices," in which respondents were given the following options: "Have implemented," "Plan to implement within the next 6 months," "Plan to implement the practice sometime after 6 months," "Don't plan to implement," and "Not sure how to implement/need more information about this item." In addition, the survey asked about respondents' usage and opinions on resources and technical assistance available to them. This method was used to supplement data already being collected through the NAP SACC self-assessment tool. A copy of the survey can be found in Appendix 5iii.[24]

D. Trainer Focus Groups

BOSR data collection staff conducted two focus groups with NAP SACC Program trainers. These focus groups were conducted at the end of the technical assistance period, occurred on August 18, 2011 and August 23, 2011, and lasted approximately one hour. Seven out of ten trainers participated. The intent of the focus groups was to discern the trainers' perception on successes and challenges of the NAP SACC program. Each focus group was conducted as a conference call in which participants were asked a series of open-ended questions. Questions ranged from what the trainers found valuable about the training to what they felt could be modified to make it

more effective.[24] The schedule of questions for the trainer focus groups can be found in a previous report.[12]

E. Follow-up Provider Telephone Interviews

During October of 2011 (approximately six months after the technical assistance period), the BOSR staff conducted telephone interviews with a random selection of FCCH providers who participated in the NAP SACC training. The interviews were conducted by professional BOSR telephone interviewers, and lasted approximately 20 to 30 minutes. From all the providers that participated in the training, BOSR randomly selected 52 individuals to conduct in-depth telephone interviews. The purpose of this data collection effort was to further understand the changes implemented and materials used in the child care home setting as a result of participation in the program. It also assessed areas of value and improvement for the training. Interviewees were asked nine open-ended questions in addition to a handful of probe/follow-up questions. The interview schedule of questions can be found in Appendix 5iv. Interviews were recorded and then transcribed by BOSR transcriptionists. Using the interview transcripts, a coding scheme was created to analyze the results of the interviews.[24]

F. Provider Home Visits

BOSR data collection staff traveled to five FCCHs across the state in November 2011. These facilities consisted of a combination of urban and rural FCCHs. BOSR staff conducted site visits for facilities within a 90-mile driving distance of Lincoln. Each site was given a $30 honorarium for allowing the interruption into their day's activities. Alternative arrangements (such as mailing a disposable camera to be returned to BOSR) were made for sites that were not within a 90-mile driving distance of Lincoln. The

questions during these visits were based on information providers had given during the telephone interview and aimed to learn examples of NAP SACC practices that had been implemented, and the different ways in which they had been implemented, first-hand . The interviews were audio-recorded and later transcribed by BOSR transcriptionists. Typically, they were asked to explain changes they had made since the NAP SACC training and show examples of what they had done. While at the site, photographs were taken to help gather visual documentation of the facility's successes related to the project goals and various changes implemented.[24]

Data Analysis

Data was entered and coded into IBM® SPSS® Statistics 21 software. by BOSR. The data had all identifying information removed before secondary analysis occurred. Not all of the data was used for this study; only WAVE I physical activity data from the 1) post-training feedback survey provider, 2) monitoring guide, 3) pre- and post-self assessment survey, , and 4) follow-up provider telephone interviews were used. Pairwise deletion was used to retain the maximum amount of data collected from each tool. Frequencies and means were found for implementation intentions for physical activity NAP SACC Best Practices and questions related to feedback on resources as selected on the post-training feedback survey, Key Areas selected for improvement and Key Areas improved as selected on the monitoring guide, provider pre- and post-self assessment scores, and physical activity-related questions and responses coded from the follow-up provider telephone interviews**.** Paired sample t-tests were used to examine the responses to Key Areas selected for improvement and Key Areas improved as selected on the monitoring guide, and analyze the provider pre- and post-self assessment mean scores for

significance ($p < 0.05$). Percent change was also used to measure the difference between provider pre- and post-self assessment mean scores that were categorically separated (urban vs. rural; FCCH-Is vs. FCCH-IIs).

CHAPTER IV

RESULTS

Introduction

Collected data were analyzed using IBM® SPSS® Statistics 21 software. The following sections explain how data were analyzed and how hypotheses were tested. The reader is reminded of research questions that were related to the physical activity behaviors, policies, and environments of Nebraska family child care homes. See below:

Research Question 1: Are there any differences in the physical activity behaviors, policies, and environments of Nebraska family child care homes caring for children ages 2-5 years after implementing the modified NAP SACC approach?

Hypothesis 1: The Healthy Child Care Initiative (NAP SACC) intervention will improve the physical activity policies and environments in Nebraska family child care homes caring for children ages 2-5 years.

Research Question 2: Are there any differences between the physical activity behaviors, policies, and environments of Nebraska family child care homes caring for children ages 2-5 years in urban and rural counties after implementing the modified NAP SACC approach?

Hypothesis 2: The Healthy Child Care Initiative (NAP SACC) intervention will independently improve the physical activity behaviors, policies, and environment in Nebraska family child care homes caring for children ages 2-5 years in urban and rural counties.

Research Question 3: Are there any differences between the physical activity behaviors, policies, and environments in Family Child Care Homes-I (FCCH-Is) and

Family Child Care Homes-II (FCCH-IIs) after implementing the modified NAP SACC approach?

Hypothesis 3: The Healthy Child Care Initiative (NAP SACC) intervention will independently improve the physical activity policies and environment in Family Child Care Homes-I and Family Child Care Homes-II in Nebraska.

Frequencies, means, paired sample t-test, and percent changes were found for the physical activity data from January 2013 - June 2013. The most common goal of increasing active play time was also one of the most improved physical activity areas. Providers also reported an increase in their own physical activity levels. Differences in goals selected and improvements made were seen between facilities located in rural and urban counties, and between FCCH-I and FCCH-II facilities. The least interest and improvements were seen for PA4 and PA5 areas. Most of the providers did find the resources provided were very helpful. Licensed, family child care homes enrolled in CACFP did make positive changes to their physical activity policies and environments utilizing a modified version of the NAP SACC approach.

Post-training Feedback Survey

A total of 228 post-training feedback surveys were sent to participating providers. Of those, 129 (55%) were returned between May and July 2011. Table 1 summarizes the implementation frequency of the physical activity Key Areas or Best Practices. Almost all of the providers reported implementing changes to PA1: Active play and inactive time (n = 121, 96.8%). Providers implemented changes to PA2: Play environment (n = 117, 92.9%) and PA3: Supporting physical activity (n = 114, 89.8%) similarly, with four providers (3.2%) indicating they do not plan to implement changes in PA2. Over half of

the providers did report implementing changes to PA4: Physical activity education and PA5: Physical activity policy (58.9%, 52.8% respectively). A few providers indicated they were not sure how to implement PA3 (n = 1, 0.8%), PA4 (n = 6, 4.8%), and PA5 (n = 3, 2.4%). Twenty four (19.4%) providers indicated they did not plan to implement PA4, as did 33 (26.4%) providers about PA5. These findings are consistent with the results found in the pre- and post-self assessment survey and monitoring guide.

Table 2 and Figure 1 summarize providers' responses on the resources they were provided during and after their training. Providers indicated they used written materials provided during the training the most (n = 99, 76.7%), followed by written materials provided by the trainer after the training (n = 55, 42.6%). Websites provided by the trainer after the training were used the least (n = 21, 16.3%). Six providers (4.7%) indicated they were not using any resources to help implement their NAP SACC physical activity goals. Almost all of the providers who answered question four found the resources very helpful (n = 90, 77.6%) or a little helpful (n = 25,21.6%). Thirteen providers did not answer, and only one provider (0.9%) indicated the resources were not helpful at all (Figure 1).

Table 1. Implementation Frequencies of the Physical Activity Best Practices

	Have implemented		Plan to implement in next 6 months		Plan to implement the practice sometime after 6 months		Don't plan to implement		Not sure how to implement? Need more information on this item	
Physical Activity Best Practices	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)
PA1 (n = 125)	121	96.8	4	3.2						

PA2 (n = 126)	117	92.9	4	3.2	1	0.8	4	3.2		
PA3 (n = 127)	114	89.8	9	7.1	2	1.6	1	0.8	1	0.8
PA4 (n = 124)	73	58.9	15	12.1	6	4.8	24	19.4	6	

									4.8
PA5 (n = 125)	66	52.8	16	12.8	7	5.6	33	26.4	3	2.4

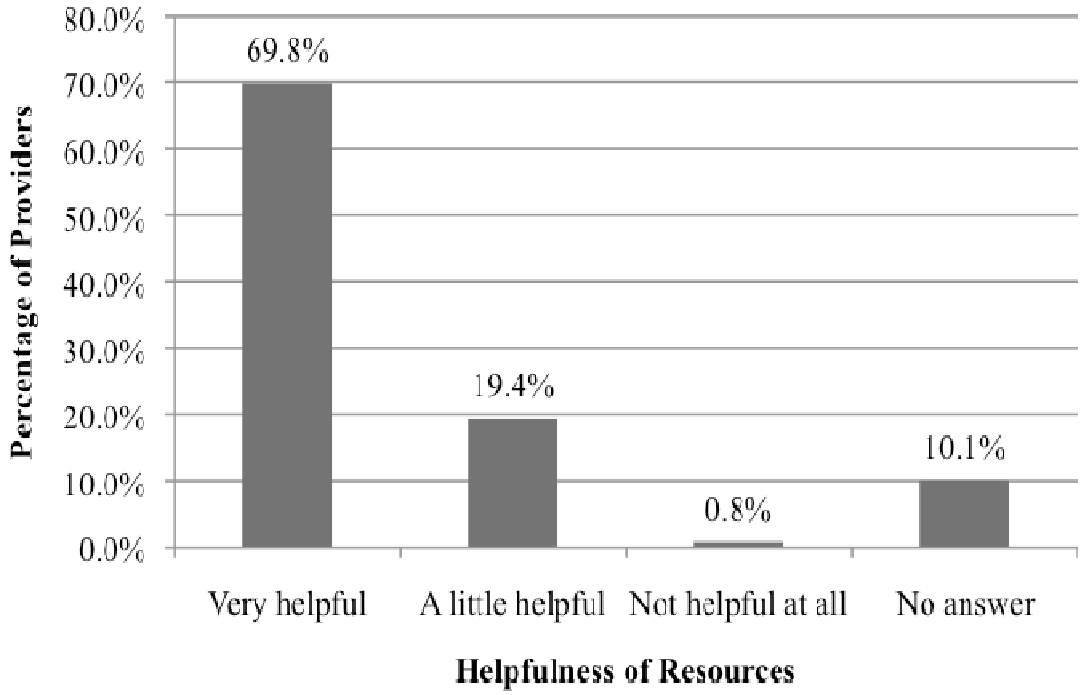
Physical Activity Key Areas:
PA1 = Active Play and Inactive Time
PA2 = Play Environment
PA3 = Supporting Physical Activity
PA4 = Physical Activity Education for Staff, Children, and Parents

ivity Education for Staff, Children, and Parents
PA5 = Physical Activity Policy

Table 2. Types of Resources Used to Help Implement NAP SACC Physical Activity Goals (n = 129)

	(n)	(%)
Websites provided during training	46	35.7
Written materials provided during training	99	76.7
Websites provided by the trainer after training	21	16.3
Written materials provided by the trainer after training	55	42.6
Feedback from the trainer	41	31.8
Others: Own training curriculum Other trainings Other resources (websites, books) Own ideas Practice	5	3.9
No resources are being used	6	4.7

Figure 1. Helpfulness of the Resources Provided During Training or by Trainers



NAP SACC Program Monitoring Guide

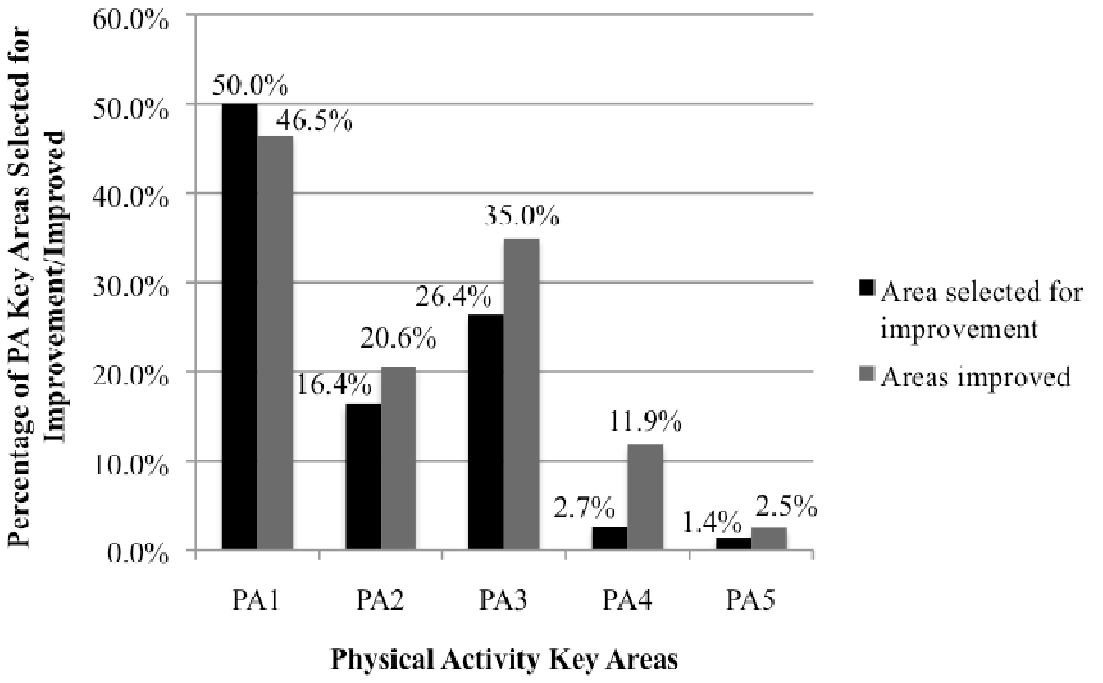
Wave I providers completed the Monitoring Guides from November 2010 to March 2011 for a total of 220 valid Monitoring Guides. As the facilities implemented the steps of NAP SACC, the providers were to asked track their progress using the Monitoring Guide. Upon receiving the Monitoring Guide, providers were asked to select one specific Nutrition Key Area and one Physical Activity Key Area they intended to improve upon in their facility. After they had completed NAP SACC, providers were to select the Key Areas they improved. They were to select multiple responses if they improved more than one Key Area throughout the NAP SACC intervention.

Figure 2 and Table 3 compare the Key Areas selected for improvement to the Key Areas reportedly improved. The most commonly selected physical activity Key Areas were PA1 (n = 110, 50.0%) and PA3 (n = 58, 26.4%) by the providers. Only three providers (1.4%) had any interest in improving PA5 in their facilities, and six (2.7%)

selected to improve PA4. The PA2 Key Area was in the middle with 36 providers (16.4%) selecting to improved upon the play environment. Seven providers (3.2%) selected multiple responses, which is not included in this figure.

The Key Areas that the most providers reported improving were PA1 (n = 74, 46.5%) and PA3 (n = 56, 35.0%). Table 3 shows PA4 had significantly more providers (n = 19, 11.9%, $p = 0.001$) actually improving this Key Area compared to the number of providers who selected to improve it. The number of providers who improved upon PA2 (n = 33, 20.6%) appeared to be similar to the number of providers who selected to improve this Key Area, however, this was also a statistically significant increase ($p = 0.001$) in providers. Lastly, four providers (2.5%) did report improving PA5.

Figure 2. Areas Selected for Improvement and Areas Improved



Physical Activity Key Areas:
PA1 = Active Play and Inactive Time

PA2 = Play Environment
PA3 = Supporting Physical Activity
PA4 = Physical Activity Education for Staff, Children, and Parents
PA5 = Physical Activity Policy

Table 3. Monitoring Guide: PA Key Areas Selected for Improvement vs. Areas Improved

	Selected for Improvement (n)	Selected for Improvement Mean^	Areas Improved (n)	Areas Improved Mean^	Sig. (2 tailed)

PA1. Active Play and Inactive Time	110	0.484	74	0.48	0.873
PA4. Physical Activity Education for Staff, Children, and Parents	6	0.039	19	0.12	0.001 *
PA5. Physical Activity Policy	3	0.019	4	0.03	0.565

(^) = Represents the mean of the number of respondents who checked (1.0) and did not check (0.0) the Key Area for the two questions, 1) Selected for Improvement and 2) Areas Improved

(*) = Statistically significant, $p < 0.05$

Provider Pre- and Post-Self Assessment

On the Self-Assessment survey, providers indicated their current physical activity practices for each sub-area of the five Key Areas. The five Physical Activity Key Areas will be referenced throughout this study using the following abbreviations:

PA1	Active Play and Inactive Time
PA2	Play Environment
PA3	Supporting Physical Activity
PA4	Physical Activity Education for Staff, Children, and Parents
PA5	Physical Activity Policy

Furthermore, each sub-area has its own definition of what is considered Best Practice by NAP SACC standards (Appendix A4). Therefore, scores indicated by the providers were coded using a four-point Likert scale. This coding system was developed in the preliminary data analysis,[12] and was also used for these analyses.

1 = minimally engaging in the NAP SACC Best Practice recommendations

2 = modestly engaging in the NAP SACC Best Practice recommendations

3 = mostly engaging in the NAP SACC Best Practice recommendations

4 = fully engaging in the NAP SACC Best Practice recommendations

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All of the facilities (n = 375), in both Waves, that participated in the NAP SACC intervention were enrolled in CACFP. Of the providers trained in Wave I, 232 providers completed the pre-assessment and 109 providers completed the pre- and post-assessment (46.9% response rate). Of the providers (n = 109) who completed both the pre- and post-self assessment surveys, 33% (n = 36) were located in urban counties, 58.7% (n = 64) in rural counties, and 8.3% (n = 9) did not identify their facilities location. In this study, the FCCH providers reported the county in which their facility was located, and then each county was classified as rural or urban based on its population. Population statistics were obtained form the 2012 Nebraska Census database. A county was defined as urban if ≥ 50,000 people lived in the county; and rural if ≤ 49,999 people lived in the county. Furthermore, the FCCHs were classified as either Family Child Care Home-I (FCCH-I) or Family Child Care Home-II (FCCH-II) based on the number of the children served; FCCH-I's served 8 or less children, and FCCH-II's served 9 or more children. Of the participating facilities, 34.9% (n = 38) provided care to eight children or less (FCCH-Is),

58.7% (n = 64) provided care to 9 or more children (FCCH-IIs). Seven facilities did not report the number of children served. The average number of children served in all reporting facilities (n = 102) was 11.1 children.

The reported scores (n = 109) were used to determine statistical significance of the pre- and post-self assessment data. This data was evaluated several different ways (non-classified pre vs. post; rural pre/ post vs. urban pre/post; and FCCH-I pre/post vs. FCCH-II pre/post).

Table 4 summarizes means and paired sample t-test results for the non-classified pre- and post-self assessment physical activity data. The paired t-test showed a statistically significant increases in 12 of the 17 sub areas, as indicated by the asterisks. PA2, "Play Environment," was the only Key Area that less than the majority of the sub-areas showed a significant increase (one of five). PA3, PA4, and PA5 had statistically significant increases in all sub-areas (Table 4). The most substantial increases were detected in the sub-areas: "Training opportunities are provided for staff in physical activity (not including playground safety)..." and "Physical activity education is offered to parent (workshops, activities and take home materials)..." (Diff. = 0.73, $p < 0.001$; Diff. = 0.61, $p < 0.001$, respectively).

The sub-area, "During active play time staff...," has the highest mean of all 17 post-self assessment scores (mean = 3.71), meaning it is the sub-area that has the most providers engaging in the Best Practice guideline of "often encourage children to be active and join in active play." The second highest post-self assessment mean was for the sub-area "Outdoor portable play equipment is...," with a mean of 3.62. There was no statistically significant increase from pre to post scores for this sub-area (pre = 3.45; p =

0.097). Although statistically significant increases ($p < 0.001$) were detected, the sub-areas with the lowest pre- and post-means include "Physical activity education is offered to parent (workshops, activities and take home materials)..." (pre/post = 1.31/1.92) and "A written policy on physical activity that covers most of the above topics..." (pre/post = 1.41/1.97).

Table 5 summarizes means and paired sample t-test results for the rural and urban pre- and post-self assessment physical activity data. This table uses the same independent scores to calculate the means and run the t-tests as used in Table 4, however, the sample was divided based on population into the urban (≥ 50,000 people/county) or rural (≤ 49,999 people/county) categories.

All 17 sub-areas scores increased in terms of percent change. Among the sub-areas with the highest percent change for both urban and rural categories, were "Physical activity education is offered to parent (workshops, activities and take home materials)..."

Table 4. Pre- and Post- Self Assessment Physical Activity Key Areas

PA1. Active Play and Inactive Time	(n)	Pre	Post	Diff.	Sig. (2 tailed)

Active play time is provided to all children	105	2.88	3.20	0.32	0.005 *
Outdoor active play is provided for all children	102	3.04			

tdoor active play is provided for all children			3.50	0.46	
					< 0.001 *
Active play time is withheld for children who misbehave	104	2.87	3.16	0.29	
					< 0.001 *

d for children who misbehave					
	104	3.07	3.28	0.21	
Children are seated (excluding naps and meals) for more					0.107

for more than 30 minutes at a time					
	102	1.88	2.30	0.42	
Television and video use consists of the					< 0.001 *

the					
PA2. Play Environment					
Fixed play equipment (tunnels, balancing equipment,	105	2.70	2.98	0.28	0.010 *

equipment, climbing equipment, overhead ladders) is					
	105	3.16	3.28	0.12	0.152
Portable play equipment (wheel toys, balls, hoops, ribbons)					

ops, ribbons) consists of					
Outdoor portable play equipment is	102	3.45	3.62	0.17	0.097

able play equipment is					
e includes	106	3.52	3.58	0.06	0.320

ncludes					
	105	2.98	3.07	0.09	4
Indoor play space includes					

	5				
PA3. Supporting Physical Activity					
During active play time staff	105	3.27	3.71	0.44	< 0.001 *

tive play time staff					
	96	1.57	1.99	0.42	
Support for physical activity is visibly displayed in 2 to 5					< 0.001 *

ayed in 2 to 5 year old classrooms and common areas by					
PA4. Physical Activity Education for Staff, Children, and Parents					
Training opportunities are provided for staff in physical	89	2.01	2.74	0.73	< 0.001 *

staff in physical activity (not including playground safety)					
Physical activity education (motor-skill development) is	90	1.90	2.41	0.51	0.002 *

lopment) is curriculum	provided for children through a standardized				
		87	1.31	1.92	0.61
Physical activity education is offered to parent (workshops,					< 0.001 *

ent (workshops, activities and take home materials)					
PA5. Physical Activity Policy					
A written policy on physical activity that covers most of the	94	1.41	1.97	0.56	< 0.001 *

ctivity that covers most of the above topics

(*) = Statistically significant, $p < 0.05$
Coding Scale for Providers Scores:
1 = minimally engaging NAP SACC Best Practice recommendations
2 = modestly engaging in the NAP SACC Best Practice recommendations
3 = mostly engaging in the NAP SACC Best Practice recommendations
4 = fully engaging in the NAP SACC Best Practice recommendations

Table 5. Rural vs. Urban Pre- and Post- Self Assessment Physical Activity Key Areas

	Urban	Rural

PA1. Active Play and Inactive Time	(n)	Pre	Post	% Δ	(n)	Pre	Post	% Δ

ldren	34	2.88	3.32 *	13.3	68	3.12	3.59 *	13.1
PA2. Play Environment								

Fixed play equipment (tunnels, balancing equipment, climbing equipment, overhead ladders) is	34	2.65	2.94	9.9	71	2.73	3.00 *	9.0

PA3. Supporting Physical Activity

PA4. Physical Activity Education for Staff, Children, and Parents

most of the above topics	34	1.44	1.88 *	23.4	60	1.40	2.02 *	30.7

(*) = Statistically significant, $p < 0.05$. See Appendices A6i-6ii.

% Δ = Percent change of pre to post

Coding Scale for Providers Scores:
1 = minimally engaging NAP SACC Best Practice recommendations
2 = modestly engaging in the NAP SACC Best Practice recommendations
3 = mostly engaging in the NAP SACC Best Practice recommendations
4 = fully engaging in the NAP SACC Best Practice recommendations

(% Δ = 29.8%, 33.2%, respectively) and "A written policy on physical activity that covers most of the above topics..." (% Δ = 23.4%, 30.7%, respectively). Both of these sub-areas also had statistically significant increases ($p = 0.014$, 0.034) in mean scores in the urban and rural categories. The paired t-test showed a statistically significant increases in 8 out of 17 sub-areas for the urban facilities, and 11 out of 17 for the rural facilities (Appendix A6i-ii). The data in Table 5 suggests facilities in the urban counties did not improve as many Key Areas as the facilities in rural counties, or did not make as many major improvements in specific sub-areas.

The sub-areas found to have the highest and lowest means of all 17 post-self assessment scores were similar to Table 4, for both urban and rural categories. PA3 and PA5 had statistically significant increases in all sub-areas for urban and rural facilities

(Appendix A6i-ii). The urban facilities did not see a statistically significant increase in "Active play time is withheld for children who misbehave..." (pre/post = 2.91/3.15; p = 0.103), "Television and video use consists of the..." (pre/post = 2.16/2.50; p = 0.062), or "Fixed play equipment (tunnels, balancing equipment, climbing equipment, overhead ladders) is..." (pre/post = 2.65/2.94; p = 0.106), while the rural facilities did (p = 0.001, < 0.001, 0.46). However, the actual means of the post-scores of the urban facilities are not that different than the mean post-scores in Table 4 or the rural facilities (+/- 0.2 -0.29). Rural facilities did have a lower pre-assessment mean for "Television and video use consists of the..." (pre = 1.76) than urban facilities, meaning the TV was turned on for 3-5+ hours per week, but statistically significant improvement was reported (post = 2.21). The urban facilities post-mean for the sub-area, "Support for physical activity is visibly displayed in 2 to 5 year old classrooms and common areas by..." was higher (post = 2.27), or closer to the Best Practice, than the rural facilities (post = 1.84) even though both categories saw statistically significant increases (urban p = 0.001; rural p = 0.019). Paired sample t-test data can be found in Appendices A6i-ii.

Table 6 summarizes means and paired sample t-test results for the FCCH–Is and FCCH-IIs pre- and post-self assessment physical activity data. This table uses the same independent scores to calculate the means and run the t-tests as used in the previous two tables, however, the sample was divided based the number of children served in each facility, FCCH-Is (≤ eight children) and FCCH-IIs (≥ nine children).

Of the 17 sub-areas, 16 scores for FCCH-Is and FCCH-IIs, increased in terms of percent change. The sub-areas "Portable play equipment (wheel toys, balls, hoops, ribbons) consists of..." for FCCH-Is and "Outdoor play space includes..." for FCCH-IIs

saw a 0.6% decrease in pre- and post-means, but was not statistically significant. "Physical activity education is offered to parent (workshops, activities and take home materials)..." was among the sub-areas with the highest percent change for both FCCH-Is and FCCH-IIs (% Δ = 22.3%, 37.7%, respectively); a statistically significant increase was determined for this sub-area only for the FCCH-IIs ($p < 0.001$). The paired t-test showed a statistically significant increases in 4 out of 17 sub-areas for the FCCH-Is, and 12 out of 17 for the FCCH-IIs (Appendix A7i-ii). The data suggests FCCH-Is did not improve as many Key Areas as FCCH-IIs, nor did the providers make as many major improvements in specific sub-areas. Facilities in rural counties (Table 5) and FCCH-IIs appear to have had more success implementing physical activity changes than facilities in urban counties and FCCH-Is, based on the statistically significant increases.

The sub-areas found to have the highest means of all 17 post-self assessment

Table 6. FCCH-Is vs. FCCH-IIs Pre- and Post- Self Assessment Physical Activity Key Areas

	FCCH-Is	FCCH-IIs

PA1. Active Play and Inactive Time	(n)	Pre	Post	% Δ	(n)	Pre	Post	% Δ

Teacher-led physical activity is provided to all children	42	2.69	3.02 *	10.9	60	2.25	2.82 *	20.2

Children are seated (excluding naps and meals) for more than 30 minutes at a time	43	2.93	3.26	10.1	61	3.16	3.30	4.2

Outdoor portable play equipment is	41	3.56	3.59	0.8	61	3.38	3.64	7.1

PA3. Supporting Physical Activity

PA4. Physical Activity Education for Staff, Children, and Parents

Physical activity education (motor-skill development) is provided for children through a standardized curriculum	37	2.03	2.41	15.8	53	1.81	2.42 *	25.2

(*) = Statistically significant, $p < 0.05$. See Appendices A7i-ii.

ndices A7i-ii.
% Δ = Percent change of pre to post
Coding Scale for Providers Scores:
1 = minimally engaging NAP SACC Best Practice recommendations
2 = modestly engaging in the NAP SACC Best Practice recommendations
3 = mostly engaging in the NAP SACC Best Practice recommendations
4 = fully engaging in the NAP SACC Best Practice recommendations

scores were similar to Table 4 and Table 5. The lowest post-self assessment mean for FCCH-Is was also consistent with Tables 4 and 5, but the lowest for FCCH-IIs was for "Support for physical activity is visibly displayed in 2 to 5 year old classrooms and common areas by..." (pre/post = 1.47/1.95). PA3, PA4, and PA5 had statistically significant increases in all sub-areas for FCCH-IIs (Appendix A7ii). The FCCH-Is had statistically significant increases in three of the six sub-areas for PA1, and one of two Key Areas in PA3 (Appendix A7i). The FCCH-IIs category had the highest post-self assessment mean for "A written policy on physical activity that covers most of the above topics..." (2.11) compared to all other categories (i.e. non-classified, urban, rural), which was a statistically significant increase from the pre-self assessment (1.39, $p < 0.001$) . Paired sample t-test data can be found in Appendices A7i-ii.

Follow-up Provider Phone Interviews

A total of 40 (76.9%) phone interviews were completed from a sample of 52 providers. Four of the nine open-ended interview questions were evaluated for this study, including questions five, six, seven, and eight (Appendix A5iv). Each of those questions had a few follow-up/probing questions associated with them; these were also evaluated.

Table 7 summarizes the frequency of the six themes identified by the BOSR Center for the question asking the providers to describe the physical activity changes they had implemented. The majority of the providers described adding more physical activity outside time (n = 19, 47.5%) and inside time (n = 17, 42.5%). The theme with the lowest

provider response was implementing less TV (n = 3, 7.5%). Six providers (15.0%) did indicate they had not implemented any physical activity changes since the NAP SACC training. Table 8 summarizes the responses to the follow-up questions related to the

Table 7. Frequency of Physical Activity Changes Identified in Phone Interviews (n = 40)

	Checked		Not Checked	
	(n)	**(%)**	**(n)**	**(%)**
Q5a. What physical activity changes have you implemented..?				
Added more inside time	17	42.5	23	57.5
Provider(s) more involved	5	12.5	35	87.5
Added more outside time	19	47.5	21	52.5
More structured time	12	30.0	28	70.0
Less TV	3	7.5	37	92.5
None	6	15.0	34	85.0

Table 8. Frequency of Physical Activity Goals Identified in Phone Interviews (n = 40)

	Checked/Yes^		Not Checked/Missing^	
	(n)	(%)	(n)	(%)
Q5b. What were your goals related to physical activity?*				
Provider(s) more involved	5	16.7	25	83.3
More outside time/more to do	4	13.3	26	86.7
More active time	18	60.0	12	40.0
More structured time	6	20.0	24	80.0
Less TV	3	10.0	27	90.0
Nothing specific	5	16.7	25	83.3
Q5c. Able to implement physical activity goals?	22	55.0	18	45.0

(^): "Yes" and "Missing" correspond to Q5c.
(*): For each topic, two providers did not know (DK) their goals and eight did not answer (NA).

physical activity goals. The physical activity goal with the most responses was to add more active time (n = 18, 60.0%). Consistent with Table 7, three providers (10.0%) stated their physical activity goal was to decrease TV time. Five providers (16.7%) did not have any specific activity goal in mind. Lastly, when asked if they were able to implement their physical activity goals, 22 (55.0%) providers answered yes.

Question six asked about successes and barriers providers experienced. Out of 14 total themes describing the providers' successes of the NAP SACC intervention, three themes related to physical activity successes emerged. Seven providers (17.5%) stated they used new games and/or toys, and two providers (5.0%) stated they, as the provider, were more involved in physical activity. Almost half of the providers (n = 18, 45.0%) stated they were successful in implementing more exercise in their facility.

Barriers identified, and the number of providers who experienced each barrier, included: behaviors of children (n = 9), space and cost limitations (n = 1, 4), no time for preparations/changes (n = 5), weather (n = 2), finding active play for all ages (n = 6), and nutrition related (n = 3). Fifteen providers (37.5%) stated they did not experience any barriers in implementing their NAP SACC goals.

The last two questions evaluated (Q7 and 8) asked providers how the children's parents responded to the changes, and how the changes implemented influenced their personal health. Fifteen providers (37.5%) reported parents being happy with the healthy changes in general, and five (12.5%) stated parents had noticed the physical activity

changes implemented in the FCCHs. However, 16 providers (40.0%) reported the parents had not noticed any changes or differences since NAP SACC changes were implemented. In terms of changes made by the providers for their own health, 15 (37.5%) reported being more active and 24 (60.0%) stated they were making some type of healthier nutrition choice. Twelve (30.0%) providers stated that had not made any changes to improve their own health since completing the NAP SACC training.

CHAPTER V

DISCUSSION

With more than 12.25 million (61.3%) United States children less than five years of age in some type of regular child care arrangement,[3] the child care environment is an ideal setting to promote and practice healthy behaviors, environments, and policies. Several childhood obesity prevention programs have been developed over the past decade, specifically for child care settings. However, most have not been evaluated to assess their effectiveness of preventing childhood obesity. NAP SACC is one of the few that has been researched from its beginning in 2002, and there is evidence of its effectiveness in creating healthier nutrition and physical activity behaviors, environments and policies in the child care setting. This secondary analysis provides evidence of the effectiveness that the modified NAP SACC approach had on physical activity policy and environments in Nebraska FCCH. Although providers did report positive changes in their own and the children's physical activity behavior, behavior was not directly assessed with these data collection tools.

Statistically significant increases were found in 12 of the 17 pre- and post-self assessment sub-areas. The most common goal of increasing active play time was also one of the most improved physical activity areas, reported by participants in all four data collection tools analyzed. From the pre- and post-self assessment mean post-scores (Tables 4-6), the children were provided 91-120 minutes of active play each day which

was a significant increase ($p < 0.05$) from mean pre-scores. In addition to the children receiving more active play time, the staff often encouraged the children to be active and joined them in active play (Table 4 mean = 3.71). Fifteen of the 40 providers who were interviewed via phone stated their level of physical activity had increased with NAP SACC. Active play time for children is needed to improve and enhance gross motor skills and is an ideal time for the providers to engage in physical activity that is beneficial for their own health.[4,5,6] Conversely, implementing less TV time throughout the week was only identified by three providers in the phone interviews as a goal and that change was made. A statistically significant increase was found in Table 4 for TV/video viewing; however, the mean post-score (2.30) tells researchers that TV and video use consists of three to four hours per week. Even with the reported increase in active time in the family child care homes, it is important to continue to improve (reduce) the amount of television viewed by the children as it is associated with childhood obesity.[26,27]

The sub-areas that did not show statistically significant changes had mean pre-scores at or close to three, and slight increases were seen in the post-scores. For example, the mean pre-score of the sub-area "Outdoor portable play equipment is..." was 3.45, and the mean post-score was 3.62. In other words, the facilities were already practicing/supplying/implementing these physical activity sub-areas close to the Best Practice recommendations.

Participants reported statistically significant changes in PA4: Physical activity education for staff, children, and parents and PA5: Physical activity policy, however, the mean post-scores were still fairly low (Tables 4-6). According to the Monitoring Guide and Post-Training Feedback Surveys, providers had very little interest in implementing

changes to PA4 and PA5. A few providers indicated in the Post-Training Feedback Surveys that they needed more information on PA4 and PA5 in order to implement them. Physical activity education and policy are the two Key Areas that NAP SACC program managers and trainers need to qualitatively investigate further as to why providers are resistant to making changes.

This study has demonstrated several differences in how facilities located in urban and rural counties, and how the number of children in each facility (FCCH-Is and FCCH-IIs), impacts the significance in physical activity changes. Results from the pre- and post-self assessment have provided insight as to which specific sub-areas rural and urban facilities changed significantly. This can aid program managers and trainers in the future to better understand the potential needs of the urban and rural facilities, to develop a more effective action plan for each facility, and to provide appropriate resources to help implement the desired physical activity changes.

Based on mean pre- and post-scores, children are seated (excluding naps and meals) more than 30 minutes at a time more times per week in urban facilities and outdoor play space appears to be slightly more abundant in rural counties. Limited indoor and outdoor space has been identified as a barrier in a previous study,[28] and it could have played a part in the higher amount of seated time in urban facilities. Space was identified, during a follow-up phone interview, as a barrier for one provider in this study. Conversely, the data in Tables 4-6 show that providers had plenty of open running space for children to play outside (post-means = > 3.50) and had some indoor space for children to be active by jumping, rolling, and skipping (post-means = > 3.00). In this study, indoor and outdoor space was not as limiting as the researchers originally thought.

Rural facilities provided physical activity education through a standard curriculum less often (rarely/never to 1 time per month) than urban facilities prior to the NAP SACC, but a statistically significant increase was made. The mean post-scores of rural and urban facilities were similar, meaning children in both types of facilities now have access to physical activity education at least once per month through a standard curriculum. As previously discussed, PA4 was not of much interest or priority for providers. A possible explanation for the lack of interest to educate may stem from the lack of education the providers have completed. According to the NE-DHHS website,[20] child care providers only need a high school diploma or GED. Previous research concluded caregivers who were better educated and had received more recent and higher levels of training, provided richer learning environments.[29] Furthermore, it is possible that the providers, because of their education level, may not have utilized some of the resources provided during the trainings or by the trainers (Table 2). According to Tables 4-6, training opportunities provided for staff on physical activity (not including playground safety) significantly increase. More providers may be interested in the education component for children and parents if they have access to more opportunities themselves.

Even though positive changes were reported for all but one of the sub-areas, FCCH-Is made almost zero to little improvement, as evidenced by only four sub-areas significantly changing. A possible explanation for this is that 12 of the sub-areas had higher pre-assessment mean scores than FCCH-IIs. Another factor could be the sample size of the FCCH-Is was less than the FCCH-IIs. Looking outside of the data, the

availability of space, resources, funding, etc. may not be as prevalent or easily accessible for FCCH-I providers.

The results of this study have identified areas of improvement for program managers and trainers (i.e. education, policy). Offering tailored trainings after the action plan has been established may increase the amount of change for each sub-area selected, and may increase the number of changes each facility chooses to improve. Tailored training ideas that may be beneficial, based on this data, include 1) physical activity policy writing and standards, 2) physical activity curriculum, structured games, specific exercises or movements for children of varying ages, and 3) how to incorporate physical activity into existing activities or curricula to decrease sit time and TV time. Overall, the NAP SACC program has been shown to positively impact the physical activity behaviors, environment, and policies of family child care homes in Nebraska.

Limitations

While this study will contribute to the childhood obesity prevention research in child care settings, some limitations do exist. One limitation of this study is that the providers that participated in the modified NAP SACC approach were self-selected. Additionally, although the NAP SACC Self-Assessment Survey has been proven reliable and valid, it is a self-assessment. Self-reporting may be responsible for the inconsistencies in the frequencies of responses for the pre- and post-self assessment survey. Differences in frequencies in Tables 5 and 6 may have affected the levels of significance and may play a part in the negative percent-changes identified. The potential for human error in the data collection, data entry, and analysis process is a limitation and could increase the chance of error.

Outliers existed in the demographic data. By NE-DHHS licensing definitions, family child care homes-I can care for up to eight children with one provider, and family child care homes-II can care for up to twelve children with two providers. Some of the facilities included in this data had more than 50 children, and these were included in the FCCH-IIs data.

Lastly, no objective measures were included in the data collection tools. Five home visits were conducted after the NAP SACC program (data not analyzed for this study) but the researchers did not directly measure pre- or post-outcomes. Accelerometers are one way to directly measure the physical activity of the children ages three to five and providers over an extended period of time.[30,31] Standards do not currently exist for children under the age of three.[30] Researcher observations would be another example of an objective measure used to assess physical activity.

Implications for Future Research

As research on the physical activity environment in child care settings continues, it is critical for future researchers to evaluate childhood obesity prevention programs in child care settings, particularly NAP SACC, objectively. Objectively measuring child and providers' behaviors through accelerometers and/or observations, assessing the children and providers' weight and/or Body Mass Index (BMI) pre- and post-intervention, and observing the effects of changes in the physical activity environment can help solidify the impact of these programs. Furthermore, physical activity education and policy are the two Key Areas that NAP SACC program managers and trainers need to qualitatively investigate further to understand why providers are more hesitant or resistant to making changes. Developing additional, subsequent trainings tailored to each Key Area, as

discussed, would provide an educational opportunity for the child care providers and allow them to better understand materials, resources, and importance of implementing changes specific to their facility.

The impact of television and video viewing duration and content for children ages 0-5 needs to be further researched. Additionally, obtaining provider views on why, what time(s) of the day, how are often, and a description of the content being viewed could provide researchers with a clearer way to approach providers and help reduce TV and video viewing in child care settings.

To increase effectiveness, consistency, and compliance of physical activity recommendations and policies, child care providers should be provided only one, comprehensive set of guidelines or standards upon obtaining licensure. The three national guidelines and standards from NAPSE, PCO, and IOM present very similar physical activity standards. These three evidenced based standards need to be strategically combined into one, evidenced-base document and should be provided to current and future child care providers as part of maintaining or obtaining licensure.

Conclusions

Nebraska is the first state to utilize a modified version of the evidenced-based approach, NAP SACC, in family child care homes. Therefore, it is also the first state to demonstrate its effectiveness in positively changing the physical activity policies and environments of family child care homes. The effectiveness of the modified NAP SACC approach on physical activity behaviors cannot be determined with the current data collection tools. A future opportunity exists for a groundbreaking NAP SACC study with the addition of a tool or method to objectively measure physical activity behaviors of the

children and providers. Additionally, gathering more qualitative data on television and video viewing in FCCHs could further benefit this area and potentially create healthier, less obesogenic child care environments. In order for child care providers around the country to improve the physical activity environments of their facilities, researchers, policy makers, and current child care providers need to collaborate to develop one, comprehensive set of physical activity guidelines or standards to be available upon obtaining licensure, and continually reinforced. In conclusion, NE DHHS/NAFH Program, current Nebraska NAP SACC sites, and future NAP SACC can benefit from this research in many ways. This study has identified several strengths and weaknesses FCCH providers utilizing the modified version of NAP SACC have experienced. The modified version of NAP SACC will continue to grow in its effectiveness thanks to the FCCH providers who participated in this study.

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APPENDIX A1

University of Nebraska-Lincoln Institutional Review Board Letter of Approval

March 6, 2013

Katie Taylor
Department of Nutrition and Health Sciences
3708 Paxton Drive Lincoln, NE 68521

Shinya Takahashi
Department of Nutrition and Health Sciences
104E LEV, UNL, 68583-0806

IRB Number: 20130313291 EX
Project ID: 13291
Project Title: Assessing the Implementation of Nutrition and Physical Activity Self-Assessment for Child Care (NAP SACC) for Changes in Physical Activity Behavior, Policy, and Environment in Nebraska Family Child Care Homes

Dear Katie:

This letter is to officially notify you of the certification of exemption of your project by the Institutional Review Board (IRB) for the Protection of Human Subjects. It is the Board's opinion that you have provided adequate safeguards for the rights and welfare of the participants in this study based on the information provided. Your proposal is in compliance with this institution's Federal Wide Assurance 00002258 and the DHHS Regulations for the Protection of Human Subjects (45 CFR 46) and has been classified as Exempt Category 4.

You are authorized to implement this study as of the Date of Exemption Determination: 03/06/2013.

We wish to remind you that the principal investigator is responsible for reporting to this Board any of the following events within 48 hours of the event:
* Any serious event (including on-site and off-site adverse events, injuries, side effects, deaths, or other problems) which in the opinion of the local investigator was unanticipated, involved risk to subjects or others, and was possibly related to the research procedures;
* Any serious accidental or unintentional change to the IRB-approved protocol that involves risk or has the potential to recur;
* Any publication in the literature, safety monitoring report, interim result or other

finding that indicates an unexpected change to the risk/benefit ratio of the research;
* Any breach in confidentiality or compromise in data privacy related to the subject or others; or
* Any complaint of a subject that indicates an unanticipated risk or that cannot be resolved by the research staff.

This project should be conducted in full accordance with all applicable sections of the IRB Guidelines and you should notify the IRB immediately of any proposed changes that may affect the exempt status of your research project. You should report any unanticipated problems involving risks to the participants or others to the Board.

If you have any questions, please contact the IRB office at 472-6965.

Sincerely,

Becky R. Freeman

Becky R. Freeman, CIP
for the IRB

APPENDIX A2

Nebraska Department of Health and Human Services Permission Letter

Department of Health & Human Services
DHHS
NEBRASKA

Division of Public Health

State of Nebraska
Dave Heineman, Governor

February 1, 2010

RE: Katie Taylor, University of Nebraska at Lincoln Graduate Student
Assessing the Physical Activity Knowledge of Nebraska In-Home Child Care Providers

To whom it may concern:

The Nebraska Department of Health and Human Services, Nutrition and Activity for Health (NAFH) Program is granting Katie Taylor, University of Nebraska at Lincoln (UNL) Graduate Student, permission to utilize the Nebraska Healthy Child Care Initiative, *Implementing NAP SACC (Nutrition and Physical Activity Self-Assessment for Child Care) in Child Care Homes'* physical activity data to complete her Master's Thesis project. The data was previously collected November 2010 through June 2012 by the UNL Bureau of Sociologic Research (BOSR) in collaboration with the NAFH Program staff.

The NAFH Program staff in collaboration with the UNL BOSR did not submit IRB approval because it was not needed for the data collection project. We ask that when Katie is working with the data specific to physical activity that she removes any identifying information such as: child care facility provider names, contact information, Child and Adult Care Food Program (CACFP) Organizations, CACFP Sponsor NAP SACC trainers and facility names. Any other additional request for data including the Healthy Child Care Award database can be requested via email submission and data will be sent without identifiers. We ask that all analysis/results be reported in a way that does not reveal any organization or individual.

If you have any additional questions or comments, please contact us at: 402-471-1045 or via email at brian.coyle@nebraska.gov.

Thank you,

Brian Coyle
Nutrition and Activity for Health Physical Activity Coordinator

Mihaela Johnson
Nutrition and Activity for Health Epidemiology Surveillance Coordinator

APPENDIX A3

Timeline and Overview of Nebraska Healthy Child Care Initiative

Timeline and Overview of the Nebraska Healthy Child Care Initiative	
Timeline	**Activity**
Feb 2010 Mar. 2010	**Funding Secured and Capacity Built** • CPPW grant awarded to DHHS • Grant coordinator hired • Partnership with CACFP Sponsor Organizations established
April 2010 May 2010 Ongoing	**Prepared Trainers** • Ten CACFP trainers completed Center TRT on-line NAP SACC Training • Half-day procedure training for CACFP trainers and sponsor directors conducted by DHHS • Monthly TA calls with CACFP trainers conducted
  Nov.2010- Mar. 2011 Sept. 2011- Feb. 2012	**Prepared Child Care Home Providers** • CACFP trainers recruited 310 child care home providers • NAP SACC training (1 day) for providers – worth 6 hours of continuing education credit • Child care home providers completed NAP SACC pre-assessment tool and action plan • Each child care home provider selected one nutrition and one physical activity goal in their action plan
Aug.2010- Feb. 2012	**Follow-up** • CACFP trainers provided 5 weeks of TA to child care home providers • Child care home providers completed NAP SACC tool for post-assessment at 6 months
Sept.2011- April 2012	**Recognition** • DHHS mailed child care home providers an application of the Healthy Child Care Recognition Award • Eligible child care home providers applied for the Award (eligibility based on completion of pre/post NAP SACC tool, documented improvements in policy/practices and good standing with DHHS Child Care Licensure • Child care home providers received award certificate, window cling and media recognition

APPENDIX A4

The NAP SACC Best Practice Recommendations for Child Care Facilities

NAP SACC Best Practice Recommendations for Child Care Facilities

Key Area	Best Practices
Nutrition:	
N1. Fruits and Vegetables	• Offer fruit (not juice) at least 2x a day. • Serve fruit canned in its own juice, fresh, or frozen all of the time. • Offer vegetables (not fried) at least 2x a day. • Offer vegetables, other than potatoes, corn or green beans 1 or more times per day. • Prepare cooked vegetables without added meat fat, margarine or butter.
N2. Meats, Fats, and Grains	• Offer fried or pre-fried potatoes less than once a week or never. • Offer fried or pre-fried meats or fish less than once a week or never. • Offer high-fat meats less than once a week or never. • Offer beans or lean meats at least once a day. • Offer high fiber, whole grain foods at least 2x a day. • Offer sweets or salty foods less than once a week or never.
N3. Beverages	• Make drinking water easily visible and available for self-serve both indoors and outdoors. • Offer 100% fruit juice 2x a week or less. • Offer sugary drinks rarely or never. • Serve skim or 1% milk to children over 2 years. • Locate soda and other vending machines off-site.
N4. Menus and Variety	• Use a cycle menu of 3 weeks or greater that changes with the seasons. • Include a combination of new and familiar foods on weekly menus. • Include foods from a variety of cultures on weekly menus.
N5. Feeding Practices	• Staff should help children determine if they are full before removing their plate. • Staff should help children determine if they are still hungry before serving additional food. • Staff should gently and positively encourage children to try a new or less favorite food. • Do not use food to encourage positive behavior.
N6. Foods Offered Outside of Regular Meals and Snacks	• Provide and enforce written guidelines for healthier food brought in and served for holidays and celebrations. • Celebrate holidays with mostly healthy foods and non-food treats. • Fundraising should consist of selling non-food items only.
N7. Supporting Healthy Eating	• Staff should join children at the table for meals and consume the same food and drinks. • Always serve meals family style. • Staff should rarely or never eat less healthy foods in front of the children. • Staff should talk with children about trying and enjoying healthy foods.

	• Provide visible support for healthy eating in 2 to 5 year old classrooms and common areas through use of posters, pictures, and displayed books.
N8. Nutrition Education	• Provide training opportunities on nutrition (other than food safety and food program guidelines) for staff 2x per year or more. • Provide nutrition education for children through a standardized curriculum 1x per week or more. • Offer nutrition education opportunities to parents 2x per year or more.
N9. Nutrition Policy	• Create a written policy on nutrition and food service that is available and followed. It may include items from the previous 8 nutrition key areas.
Physical Activity:	
PA1. Active Play and Inactive Time	• Provide children with at least 120 minutes of active play time each day. • Provide teacher-led physical activity to children 2 or more times per day. • Provide outdoor active play time 2 or more times per day. • Active play time should never be withheld for children who misbehave and additional active play time should be given for good behavior. • Ensure that children are not seated for periods of more than 30 minutes. • Rarely or never show television or videos.
PA2. Play Environment	• Make a wide variety of fixed play equipment available that accommodate the needs of all children. • Make a large variety of portable play equipment available for children to use at the same time. • Make outdoor portable play equipment freely available to all children at all times. • Outdoor play space should include open, grassy areas and a track/path for wheeled toys. • Make indoor play space available for all activities, including running.
PA3. Supporting Physical Activity	• Encourage children to be active and join children in active play. • Provide visible support for physical activity in 2 to 5 year old classrooms and common areas through use of posters, pictures, and displayed books.
PA4. Physical Activity Education	• Provide training opportunities on physical activity (not including playground safety) for staff 2x per year or more. • Provide physical activity education for children through a standardized curriculum 1x per week or more. • Offer physical activity education opportunities to parents 2x per year or more.
PA5. Physical Activity Policy	• Create a written policy on physical activity that is available and followed. It may include items from the previous 4 physical activity key areas.

APPENDICES A5i-iv

Data Collection Tools

A5i. Provider Pre- and Post- Self Assessment surveys

Nutrition and Physical Activity Self-Assessment for Child Care

Your Name: _____ Date: _____

Child Care Facility Name: _____

Please read each statement or question carefully and check the response that best fits your child care facility. Refer to the instruction sheet for clarification of question, examples, and definitions.

SECTION I: NUTRITION

(N1) Fruits and Vegetables				
A. Fruit (not juice) is offered:	☐ 3 times per week or less	☐ 4 times per week	☐ 1 time per day	☐ 2 or more times per day
B. Fruit is offered canned **in own juice** (no syrups), fresh, or frozen:	☐ Rarely or never	☐ Some of the time	☐ Most of the time	☐ All of the time
C. Vegetables (not including French fries, tater tots, hash browns, or dried beans) are offered:	☐ 2 times per week or less	☐ 3-4 times per week	☐ 1 time per day	☐ 2 or more times per day
D. Vegetables, other than potatoes, corn, and green beans, are offered:	☐ Less than 1 time per week	☐ 1-2 times per week	☐ 3-4 times per week	☐ 1 or more times per day
E. Cooked vegetables are prepared with added meat fat, margarine or butter:	☐ All of the time	☐ Most of the time	☐ Some of the time	☐ Rarely or never
(N2) Meats, Fats, and Grains				
A. Fried or pre-fried potatoes (French fries, tater tots, hash browns) are offered:	☐ 3 or more times per week	☐ 2 times per week	☐ 1 time per week	☐ Less than once a week or never
B. Fried or pre-fried (frozen and breaded) meats (chicken nuggets) or fish (fish sticks) are offered:	☐ 3 or more times per week	☐ 2 times per week	☐ 1 time per week	☐ Less than once a week or never
C. High fat meats (sausage, bacon, hot dogs, bologna, ground beef) are offered:	☐ 3 or more times per week	☐ 2 times per week	☐ 1 time per week	☐ Less than once a week or never

Ammerman, AS, Benjamin, SE, Sommers, JK, Ward, DS. 2004. The Nutrition and Physical Activity Self-Assessment for Child Care (NAP SACC) environmental self-assessment instrument. Division of Public Health, NC DHHS, Raleigh, NC, and the Center for Health Promotion and Disease Prevention, University of North Carolina at Chapel Hill. Revised May 2007.

D. Beans or lean meats (baked or broiled chicken, turkey, or fish) are offered:	☐ Less than 1 time per week	☐ 1-2 times per week	☐ 3-4 times per week	☐ 1 or more times per day
E. High fiber, whole grain foods (whole wheat bread, oatmeal, brown rice, Cheerios®, etc) are offered:	☐ 1 time per week or less	☐ 2-4 times per week	☐ 1 times per day	☐ 2 or more times per day
F. Sweets or salty foods (cookies, cakes, muffins, chips, etc) are offered:	☐ 1 or more times per day	☐ 3-4 times per week	☐ 1-2 times per week	☐ Less than once a week or never
(N3) Beverages				
A. Drinking water outside is:	☐ Not visible	☐ Visible, but only available during designated water breaks	☐ Easily visible and available on request	☐ Easily visible and available for self-serve
B. Drinking water inside is:	☐ Not visible	☐ Visible, but only available during designated water breaks	☐ Easily visible and available on request	☐ Easily visible and available for self-serve
C. 100% fruit juice is offered:	☐ 2 or more times per day	☐ 1 time per day	☐ 3-4 times per week	☐ 2 times per week or less
D. Sugary drinks (Kool-Aid™, sports drinks, sweet tea, punches, soda) other than 100% juice are offered:	☐ 1 or more times per week	☐ Less than 1 time per week	☐ Less than 1 time per month	☐ Rarely or never
E. Milk served to children ages 2 years and older is usually:	☐ Whole or regular	☐ 2% reduced fat	☐ 1% low-fat	☐ Skim or non-fat
F. Soda and other vending machines are located:	☐ In entrance or front of building	☐ In public areas, but not entrance	☐ Out of sight of parents and children	☐ No vending machines on site
(N4) Menus and Variety				
A. Menus used are:	☐ 1-week cycle	☐ 2-week cycle	☐ 3-week cycle or more without seasonal change	☐ 3-week cycle or more with seasonal change
B. Weekly menus include a combination of both new and familiar foods:	☐ Rarely or never	☐ Some of the time	☐ Most of the time	☐ All of the time

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C. Weekly menus include foods from a variety of cultures:	☐ Rarely or never	☐ Some of the time	☐ Most of the time	☐ All of the time
(N5) Feeding Practices				
A. When children eat less than half of a meal or snack, the staff help determine if they are full before removing the plate:	☐ Rarely or never	☐ Some of the time	☐ Most of the time	☐ All of the time
B. When children request seconds, staff help determine if they are still hungry before serving additional food:	☐ Rarely or never	☐ Some of the time	☐ Most of the time	☐ All of the time
C. Children are encouraged by staff to try a new or less favorite food:	☐ Rarely or never	☐ Some of the time	☐ Most of the time	☐ All of the time
D. Food is used to encourage positive behavior:	☐ All of the time	☐ Most of the time	☐ Some of the time	☐ Rarely or never
(N6) Foods Offered Outside of Regular Meals and Snacks				
A. Guidelines provided to parents for food brought in for holidays or celebrations are:	☐ Not available	☐ Loose guidelines with healthier options encouraged	☐ Written guidelines for healthier options that are not always enforced	☐ Written guidelines for healthier options that are usually enforced
B. Holidays are celebrated with mostly healthy foods or with non-food treats like stickers:	☐ Rarely or never	☐ Some of the time	☐ Most of the time	☐ All of the time
C. Fundraising consists of selling only non-food items (like wrapping paper, coupon books or magazines):	☐ Rarely or never	☐ Some of the time	☐ Most of the time	☐ All of the time
(N7) Supporting Healthy Eating				
A. Staff join children at the table for meals:	☐ Rarely or never	☐ Some of the time	☐ Most of the time	☐ All of the time
B. Meals are served family style (children serve themselves with limited help):	☐ Rarely or never	☐ Some of the time	☐ Most of the time	☐ All of the time
C. Staff consume the same food and drinks as the children:	☐ Rarely or never	☐ Some of the time	☐ Most of the time	☐ All of the time

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D. Staff eat or drink less healthy foods (especially sweets, soda and fast food) in front of the children:	☐ All of the time	☐ Most of the time	☐ Some of the time	☐ Rarely or never
E. Staff talk informally with children about trying and enjoying healthy foods:	☐ Rarely or never	☐ Some of the time	☐ Most of the time	☐ All of the time
F. Support for good nutrition is visibly displayed in 2 to 5 year old classrooms and common areas by:	☐ No posters, pictures, or books about healthy food displayed	☐ A few posters, pictures, or books about healthy food displayed in a few rooms	☐ Posters, pictures, or books about healthy food displayed in most rooms	☐ Posters, pictures, or books about healthy food displayed in every room
(N8) Nutrition Education for Staff, Children, and Parents				
A. Training opportunities on nutrition (other than food safety and food program guidelines) are provided for staff:	☐ Rarely or never	☐ Less than 1 time per year	☐ 1 time per year	☐ 2 times per year or more
B. Nutrition education is provided for children through a standardized curriculum:	☐ Rarely or never	☐ 1 time per month	☐ 2-3 times per month	☐ 1 time per week or more
C. Nutrition education opportunities are offered to parents (workshops, activities and take home materials):	☐ Rarely or never	☐ Less than 1 time per year	☐ 1 time per year	☐ 2 times per year or more
(N9) Nutrition Policy				
A. A written policy on nutrition and food service that covers most of the above topics:	☐ Does not exist	☐ Exists informally, but is not written or followed	☐ Is written, but not always followed	☐ Is written, available and followed

SECTION II: PHYSICAL ACTIVITY

(PA1) Active Play and Inactive Time				
A. Active play time is provided to all children:	☐ 45 minutes or less each day	☐ 46-90 minutes each day	☐ 91-120 minutes each day	☐ More than 120 minutes each day
B. Teacher-led physical activity is provided to all children:	☐ 1 time per week or less	☐ 2-4 times per week	☐ 1 time per day	☐ 2 or more times per day

Ammerman, AS, Benjamin, SE, Sommers, JK, Ward, DS. 2004. The Nutrition and Physical Activity Self-Assessment for Child Care (NAP SACC) environmental self-assessment instrument. Division of Public Health, NC DHHS, Raleigh, NC, and the Center for Health Promotion and Disease Prevention, University of North Carolina at Chapel Hill. Revised May 2007.

C. Outdoor active play is provided for all children:	☐ 1 time per week or less	☐ 2-4 times per week	☐ 1 time per day	☐ 2 or more times per day
D. Active play time is withheld for children who misbehave:	☐ Often	☐ Sometimes	☐ Never	☐ Never and we provide more active play time for good behavior
E. Children are seated (excluding naps and meals) more than 30 minutes at a time:	☐ 1 or more times per day	☐ 3-4 times per week	☐ 1-2 times per week	☐ Less than once a week or never
F. Television and video use consists of the:	☐ TV turned on for 5 or more hours per week	☐ TV turned on for 3-4 hours per week	☐ TV turned on 2 hours per week or less	☐ TV used rarely or never
(PA2) Play Environment				
A. Fixed play equipment (tunnels, balancing equipment, climbing equipment, overhead ladders) is:	☐ Unavailable at our site	☐ Only one type of equipment is available	☐ Different equipment available that suits most children	☐ Wide variety of equipment available and accommodates needs of all children
B. Portable play equipment (wheel toys, balls, hoops, ribbons) consists of:	☐ Little variety and children must take turns	☐ Some variety but children must take turns	☐ Good variety but children must take turns	☐ Lots of variety for children to use at the same time
C. Outdoor portable play equipment is:	☐ Available during special times only	☐ Located out of child sight and reach, staff must access	☐ Available on request	☐ Freely available by children at all times
D. Outdoor play space includes:	☐ No open running spaces or track/path for wheeled toys	☐ Very limited open running space, no track/path for wheeled toys	☐ Plenty of open running space, no track/path for wheeled toys	☐ Plenty of open running spaces and a track/path for wheeled toys
E. Indoor play space is available:	☐ For quiet play only	☐ For very limited movement (jumping and rolling)	☐ For some active play (jumping, rolling and skipping)	☐ For all activities, including running

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(PA3) Supporting Physical Activity				
A. During active play time staff:	☐ Supervise play only (mostly sit or stand)	☐ Sometimes encourage children to be active	☐ Sometimes encourage children to be active and join children in active play	☐ Often encourage children to be active and join children in active play
B. Support for physical activity is visibly displayed in 2 to 5 year old classrooms and common areas by:	☐ No posters, pictures, or books about physical activity displayed	☐ A few posters, pictures, or books about physical activity displayed in a few rooms	☐ Posters, pictures, or books about physical activity are displayed in most rooms	☐ Posters, pictures, or books about physical activity are displayed in every room
(PA4) Physical Activity Education for Staff, Children, and Parents				
A. Training opportunities are provided for staff in physical activity (not including playground safety):	☐ Rarely or never	☐ Less than 1 time per year	☐ 1 time per year	☐ 2 times per year or more
B. Physical activity education (motor-skill development) is provided for children through a standardized curriculum:	☐ Rarely or never	☐ 1 time per month	☐ 2-3 times per month	☐ 1 time per week or more
C. Physical activity education is offered to parents (workshops, activities and take home materials):	☐ Rarely or never	☐ Less than 1 time per year	☐ 1 time per year	☐ 2 times per year or more
(PA5) Physical Activity Policy				
A. A written policy on physical activity that covers most of the above topics:	☐ Does not exist	☐ Exists informally, but is not written or followed	☐ Is written, but not always followed	☐ Is written, available and followed

For more information about this self-assessment instrument and the NAP SACC project, please visit www.napsacc.org.

Please use the following citation when referencing this instrument: Ammerman, AS, Benjamin, SE, Sommers, JK, Ward, DS. 2004. The Nutrition and Physical Activity Self-Assessment for Child Care (NAP SACC) environmental self-assessment instrument. Division of Public Health, NC DHHS, Raleigh, NC, and the Center for Health Promotion and Disease Prevention, University of North Carolina at Chapel Hill. Revised May 2007.

A5ii. NAP SACC Program Monitoring Guide

NAP SACC Program Monitoring Guide

Facility name: _____ **ID #:** _____

Contact name: _____ **Contact phone #:** _____

Contact email: _____ **Date:** _____/_____/_____

1. **Pre self-assessment completed**

   Date completed: _____/_____/_____

2. **Action plan developed**

   Date completed: _____/_____/_____

3. **Key areas for improvement chosen by this facility**

   Nutrition (check one):
   - ☐ N1. Fruits and vegetables
   - ☐ N2. Meats, fats, and grains
   - ☐ N3. Beverages
   - ☐ N4. Menus and variety
   - ☐ N5. Feeding practices
   - ☐ N6. Foods offered outside of regular meals and snacks
   - ☐ N7. Supporting healthy eating
   - ☐ N8. Nutrition education
   - ☐ N9. Nutrition policy

   Physical activity (check one):
   - ☐ PA1. Active play and inactive time
   - ☐ PA2. Play environment
   - ☐ PA3. Supporting physical activity
   - ☐ PA4. Physical activity education
   - ☐ PA5. Physical activity policy

4. **1-day workshop completed**

   Date completed: _____/_____/_____

5. **Post self-assessment completed**

   Date completed: _____/_____/_____

6. **Technical assistance follow-up**

a. Date completed: _____/_____/_____ Minutes spent: _____

b. Date completed: _____/_____/_____ Minutes spent: _____

c. Date completed: _____/_____/_____ Minutes spent: _____

d. Date completed: _____/_____/_____ Minutes spent: _____

e. Date completed: _____/_____/_____ Minutes spent: _____

f. Date completed: _____/_____/_____ Minutes spent: _____

7. Key areas <u>improved</u> by this facility (check all that apply)

Nutrition:
- ☐ N1. Fruits and vegetables
- ☐ N2. Meats, fats, and grains
- ☐ N3. Beverages
- ☐ N4. Menus and variety
- ☐ N5. Feeding practices
- ☐ N6. Foods offered outside of regular meals and snacks
- ☐ N7. Supporting healthy eating
- ☐ N8. Nutrition education
- ☐ N9. Nutrition policy

Physical activity:
- ☐ PA1. Active play and inactive time
- ☐ PA2. Play environment
- ☐ PA3. Supporting physical activity
- ☐ PA4. Physical activity education
- ☐ PA5. Physical activity policy

8. Healthy Child Care Facility Awarded

Date awarded: _____/_____/_____

Notes and general comments:

A5iii. Provider Post-training Feedback survey

NAP SACC Post-Training Feedback

For each of the NAP SACC key areas below, please indicate if you have implemented the practice, plan to implement the practice within the next 6 months, plan to implement the practice sometime after the next 6 months, don't plan to implement, or if you are not sure how to implement the practice or need more information about the item. Please see enclosed "NAP SACC Best Practices Recommendations for Child Care Facilities" document for further descriptions of the key areas. Please reference your NAP SACC Action Plan that you developed as part of the NAP SACC training you attended.

NUTRITION KEY AREAS	Have implemented	Plan to implement within the next 6 months	Plan to implement the practice sometime after 6 months	Don't plan to implement	Not sure how to implement/ need more information about this item
N1. Fruits and vegetables	○	○	○	○	○
N2. Meats, fats and grains	○	○	○	○	○
N3. Beverages	○	○	○	○	○
N4. Menus and variety	○	○	○	○	○
N5. Feeding practices	○	○	○	○	○
N6. Foods offered outside of regular meals and snacks	○	○	○	○	○
N7. Supporting healthy eating	○	○	○	○	○
N8. Nutrition education	○	○	○	○	○
N9. Nutrition policy	○	○	○	○	○

PHYSICAL ACTIVITY BEST PRACTICES	Have implemented	Plan to implement within the next 6 months	Plan to implement the practice sometime after 6 months	Don't plan to implement	Not sure how to implement/ need more information about this item
PA1. Active play and inactive time	○	○	○	○	○
PA2. Play environment	○	○	○	○	○
PA3. Supporting physical activity	○	○	○	○	○
PA4. Physical activity education	○	○	○	○	○
PA5. Physical activity policy	○	○	○	○	○

TURN OVER - MORE QUESTIONS ON BACK

Feedback about resources

3. What types of resources are you using to help you implement your NAP SACC goals? Select all that apply.

- ☐ Websites provided during training
- ☐ Written materials provided during training
- ☐ Websites provided by the trainer after training
- ☐ Written materials provided by the trainer after training
- ☐ Feedback from the trainer
- ☐ Other, specify:

  [ ]
- ☐ No resources are being used (Skip to question 5) →

4. Overall, how helpful have the resources been?

- ○ Very helpful
- ○ A little helpful
- ○ Not at all helpful

5. Please provide any feedback about the resources, including any areas where you'd like more information or resources provided.

[ ]

Feedback about technical assistance

6. Have you received technical assistance from the trainer since training?

- ○ Yes (Go to question 7) →
- ○ No (Skip to question 8) →

7. How helpful has the technical assistance been?

- ○ Very helpful
- ○ A little helpful
- ○ Not at all helpful

8. What format(s) would you prefer to receive technical assistance from the trainer? Select all that apply.

- ☐ Phone calls
- ☐ In-person visits
- ☐ Email
- ☐ Letters

9. Please provide any feedback about the technical assistance, including any comments about the format that assistance is most useful to you.

[ ]

Thank you for completing our survey!

A5iv. Provider telephone interview schedule of questions

NAP SACC Facility Director Phone Interview

Hello, my name is _____ calling from the Research Center at the University of Nebraska. I'm calling today to follow up with you on the NAP SACC training you participated in last fall and spring. If you recall, the NAP SACC training included five modules (childhood obesity, healthy eating, physical activity, personal health and wellness, and working with families) related to nutrition and physical activity policy, practices, and environments in child care facilities. This is part of the evaluation effort associated with the training being conducted by the Bureau of Sociological Research at UNL on behalf of the Nebraska Department of Health and Human Services. This call should take approximately 15 minutes. Responding is completely voluntary and you have the right to refuse to answer any question you wish. Your decision to participate will not affect any rights or benefits to which you are otherwise entitled. Your responses will remain confidential and only be used by the evaluation team at the Bureau in summary form, in which no one will be identified. The summaries will only be released as part of the training evaluation report. May I begin now?

[IF YES, CONTINUE]

Great! In order to make note taking easier, I'd like to record our conversation. Only the evaluators will have access to the recordings and they will be destroyed after the report is finalized. May I record our conversation?

1. What did you find most valuable about the NAP SACC training?
2. What could have been improved about the training? Anything missing?
3. Did you use technical assistance after the training?
   If yes—What did you use it for? Was it helpful? Anything else you would want to add/improve?
   If no—why not?
4. What nutritional changes have you implemented in your child care facility since the training, if any? (What were your goals related to nutrition?)
5. What physical activity changes have you implemented in your child care facility since the training, if any? (What were your goals related to physical activity?)
6. How did the changes go? What were your successes? What were the barriers?
7. How have staff and parents responded to the changes?
8. Since completing the NAP SACC training, have you made any changes to help improve your own health? If so, what were they?
9. [Only ask if R indicated changes in questions 4 and/or 5] Would you be willing to allow us to come out and visit your site and take pictures (of the NAP SACC changes, not the children) to help with the project evaluation report?

That is all the questions I have for you today. Thank you for taking the time to speak with me and have a good day.

APPENDICES A6i-ii

Pre- and Post- Self Assessment Physical Activity Key Areas T-Tests

A6i. Urban data

Paired Samples T-Test: Urban Pre/Post		Sig. (2-tailed)
Pair 1	(Pre) Active play time is provided to all children - Active play time is provided to all children	.010
Pair 2	(Pre) Teacher-led physical activity is provided to all children - Teacher-led physical activity is provided to all children	.035
Pair 3	(Pre) Outdoor active play is provided for all children - Outdoor active play is provided for all children	.037
Pair 4	(Pre) Active play time is withheld for children who misbehave - Active play time is withheld for children who misbehave	.103
Pair 5	(Pre) Children are seated (excluding naps and meals) for more than 30 minutes at a time - Children are seated (excluding naps and meals) for more than 30 minutes at a time	.244
Pair 6	(Pre) Television and video use consists of the - Television and video use consists of the	.062
Pair 7	(Pre) Fixed play equipment (tunnels, balancing equipment, climbing equipment, overhead ladders) is - Fixed play equipment (tunnels, balancing equipment, climbing equipment, overhead ladders) is	.106
Pair 8	(Pre) Portable play equipment (wheel toys, balls, hoops, ribbons) consists of - Portable play equipment (wheel toys, balls, hoops, ribbons) consists of	.258
Pair 9	(Pre) Outdoor portable play equipment is - Outdoor portable play equipment is	.086
Pair 10	(Pre) Outdoor play space includes - Outdoor play space includes	.254
Pair 11	(Pre) Indoor play space includes - Indoor play space includes	.263
Pair 12	(Pre) During active play time staff - During active play time staff	.001
Pair 13	(Pre) Support for physical activity is visibly displayed in 2 to 5 year old classrooms and common areas by - Support for physical activity is visibly displayed in 2 to 5 year old classrooms and common areas by	.001

Pair 14	(Pre) Training opportunities are provided for staff in physical activity (not including playground safety) - Training opportunities are provided for staff in physical activity (not including playground safety)	.051
Pair 15	(Pre) Physical activity education (motor-skill development) is provided for children through a standardized curriculum - Physical activity education (motor-skill development) is provided for children through a standardized curriculum	.231
Pair 16	(Pre) Physical activity education is offered to parent (workshops, activities and take home materials) - Physical activity education is offered to parent (workshops, activities and take home materials)	.014
Pair 17	(Pre) A written policy on physical activity that covers most of the above topics - A written policy on physical activity that covers most of the above topics	.034

A6ii. Rural data

Paired Samples T-Test: Rural Pre/Post		Sig. (2-tailed)
Pair 1	(Pre) Active play time is provided to all children - Active play time is provided to all children	.110
Pair 2	(Pre) Teacher-led physical activity is provided to all children - Teacher-led physical activity is provided to all children	.000
Pair 3	(Pre) Outdoor active play is provided for all children - Outdoor active play is provided for all children	.000
Pair 4	(Pre) Active play time is withheld for children who misbehave - Active play time is withheld for children who misbehave	.001
Pair 5	(Pre) Children are seated (excluding naps and meals) for more than 30 minutes at a time - Children are seated (excluding naps and meals) for more than 30 minutes at a time	.264
Pair 6	(Pre) Television and video use consists of the - Television and video use consists of the	.000
Pair 7	(Pre) Fixed play equipment (tunnels, balancing equipment, climbing equipment, overhead ladders) is - Fixed play equipment (tunnels, balancing equipment, climbing equipment, overhead ladders) is	.046
Pair 8	(Pre) Portable play equipment (wheel toys, balls, hoops, ribbons) consists of - Portable play equipment (wheel toys, balls, hoops, ribbons) consists of	.330
Pair 9	(Pre) Outdoor portable play equipment is - Outdoor portable play equipment is	.457
Pair 10	(Pre) Outdoor play space includes - Outdoor play space includes	.686
Pair 11	(Pre) Indoor play space includes - Indoor play space includes	.634
Pair 12	(Pre) During active play time staff - During active play time staff	.000
Pair 13	(Pre) Support for physical activity is visibly displayed in 2 to 5 year old classrooms and common areas by - Support for physical activity is visibly displayed in 2 to 5 year old classrooms and common areas by	.019

Pair 14	(Pre) Training opportunities are provided for staff in physical activity (not including playground safety) - Training opportunities are provided for staff in physical activity (not including playground safety)	.000
Pair 15	(Pre) Physical activity education (motor-skill development) is provided for children through a standardized curriculum - Physical activity education (motor-skill development) is provided for children through a standardized curriculum	.004
Pair 16	(Pre) Physical activity education is offered to parent (workshops, activities and take home materials) - Physical activity education is offered to parent (workshops, activities and take home materials)	.001
Pair 17	(Pre) A written policy on physical activity that covers most of the above topics - A written policy on physical activity that covers most of the above topics	.001

APPENDICES A7i-ii

Pre- and Post- Self Assessment Physical Activity Key Areas T-Tests

A7i Family Child Care Home – I data

Paired Samples T-Test: FCCH1s Pre/Post		Sig. (2-tailed)
Pair 1	(Pre) Active play time is provided to all children - Active play time is provided to all children	.256
Pair 2	(Pre) Teacher-led physical activity is provided to all children - Teacher-led physical activity is provided to all children	.029
Pair 3	(Pre) Outdoor active play is provided for all children - Outdoor active play is provided for all children	.001
Pair 4	(Pre) Active play time is withheld for children who misbehave - Active play time is withheld for children who misbehave	.294
Pair 5	(Pre) Children are seated (excluding naps and meals) for more than 30 minutes at a time - Children are seated (excluding naps and meals) for more than 30 minutes at a time	.137
Pair 6	(Pre) Television and video use consists of the - Television and video use consists of the	.022
Pair 7	(Pre) Fixed play equipment (tunnels, balancing equipment, climbing equipment, overhead ladders) is - Fixed play equipment (tunnels, balancing equipment, climbing equipment, overhead ladders) is	.441
Pair 8	(Pre) Portable play equipment (wheel toys, balls, hoops, ribbons) consists of - Portable play equipment (wheel toys, balls, hoops, ribbons) consists of	.838
Pair 9	(Pre) Outdoor portable play equipment is - Outdoor portable play equipment is	.855
Pair 10	(Pre) Outdoor play space includes - Outdoor play space includes	.051
Pair 11	(Pre) Indoor play space includes - Indoor play space includes	.822
Pair 12	(Pre) During active play time staff - During active play time staff	.031
Pair 13	(Pre) Support for physical activity is visibly displayed in 2 to 5 year old classrooms and common areas by - Support for physical activity is visibly displayed in 2 to 5 year old classrooms and common areas by	.062

Pair 14	(Pre) Training opportunities are provided for staff in physical activity (not including playground safety) - Training opportunities are provided for staff in physical activity (not including playground safety)	.129
Pair 15	(Pre) Physical activity education (motor-skill development) is provided for children through a standardized curriculum - Physical activity education (motor-skill development) is provided for children through a standardized curriculum	.186
Pair 16	(Pre) Physical activity education is offered to parent (workshops, activities and take home materials) - Physical activity education is offered to parent (workshops, activities and take home materials)	.080
Pair 17	(Pre) A written policy on physical activity that covers most of the above topics - A written policy on physical activity that covers most of the above topics	.162

A7ii. Family Child Care Home – II data

Paired Samples T-Test: FCCH2s Pre/Post		Sig. (2-tailed)
Pair 1	(Pre) Active play time is provided to all children - Active play time is provided to all children	.005
Pair 2	(Pre) Teacher-led physical activity is provided to all children - Teacher-led physical activity is provided to all children	.000
Pair 3	(Pre) Outdoor active play is provided for all children - Outdoor active play is provided for all children	.003
Pair 4	(Pre) Active play time is withheld for children who misbehave - Active play time is withheld for children who misbehave	.000
Pair 5	(Pre) Children are seated (excluding naps and meals) for more than 30 minutes at a time - Children are seated (excluding naps and meals) for more than 30 minutes at a time	.424
Pair 6	(Pre) Television and video use consists of the - Television and video use consists of the	.001
Pair 7	(Pre) Fixed play equipment (tunnels, balancing equipment, climbing equipment, overhead ladders) is - Fixed play equipment (tunnels, balancing equipment, climbing equipment, overhead ladders) is	.009
Pair 8	(Pre) Portable play equipment (wheel toys, balls, hoops, ribbons) consists of - Portable play equipment (wheel toys, balls, hoops, ribbons) consists of	.057
Pair 9	(Pre) Outdoor portable play equipment is - Outdoor portable play equipment is	.066
Pair 10	(Pre) Outdoor play space includes - Outdoor play space includes	.837
Pair 11	(Pre) Indoor play space includes - Indoor play space includes	.251
Pair 12	(Pre) During active play time staff - During active play time staff	.000
Pair 13	(Pre) Support for physical activity is visibly displayed in 2 to 5 year old classrooms and common areas by - Support for physical activity is visibly displayed in 2 to 5 year old classrooms and common areas by	.001

Pair 14	(Pre) Training opportunities are provided for staff in physical activity (not including playground safety) - Training opportunities are provided for staff in physical activity (not including playground safety)	.000
Pair 15	(Pre) Physical activity education (motor-skill development) is provided for children through a standardized curriculum - Physical activity education (motor-skill development) is provided for children through a standardized curriculum	.003
Pair 16	(Pre) Physical activity education is offered to parent (workshops, activities and take home materials) - Physical activity education is offered to parent (workshops, activities and take home materials)	.000
Pair 17	(Pre) A written policy on physical activity that covers most of the above topics - A written policy on physical activity that covers most of the above topics	.000

APPENDIX A8

Definition of Acronyms

Definition of Acronyms

NAP SACC	Nutrition and Physical Activity Self-Assessment for Child Care
NE DHHS	Nebraska Department of Health and Human Services
NAFH	Nutrition and Activity for Health
CACFP	Child and Adult Care Food Program
FCCHs	Family Child Care Homes
NAPSE	National Association for Sport and Physical Education
PCO	Preventing Childhood Obesity, second edition
IOM	Institute of Medicine
IMIL	I Am Moving, I Am Learning
USDA	United States Department of Agriculture
FNS	Food and Nutrition Services
FCCH–I(s)	Family Child Care Home - I
FCCH-II(s)	Family Child Care Home - II
CPPW	Communities Putting Prevention to Work
UNC	University of North Carolina
Center TRT	Center for Training and Research Translation
PA1	Active Play and Inactive Time (Physical Activity Key Area)
PA2	Play Environment (Physical Activity Key Area)
PA3	Supporting Physical Activity (Physical Activity Key Area)
PA4	Physical Activity Education for Staff, Children, and Parents (Physical Activity Key Area)
PA5	Physical Activity Policy (Physical Activity Key Area)